The OIL WEEKLY

A Journal for
Oil and Gas Producers and Field Men

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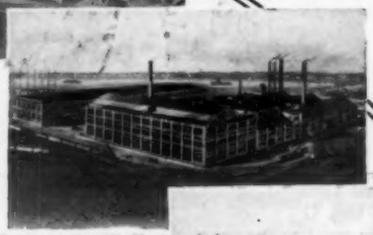

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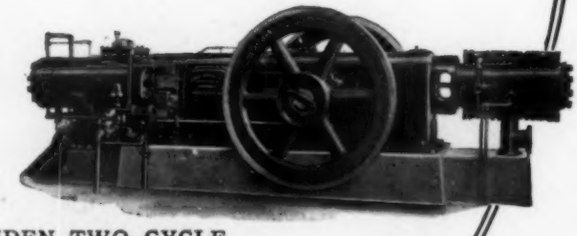

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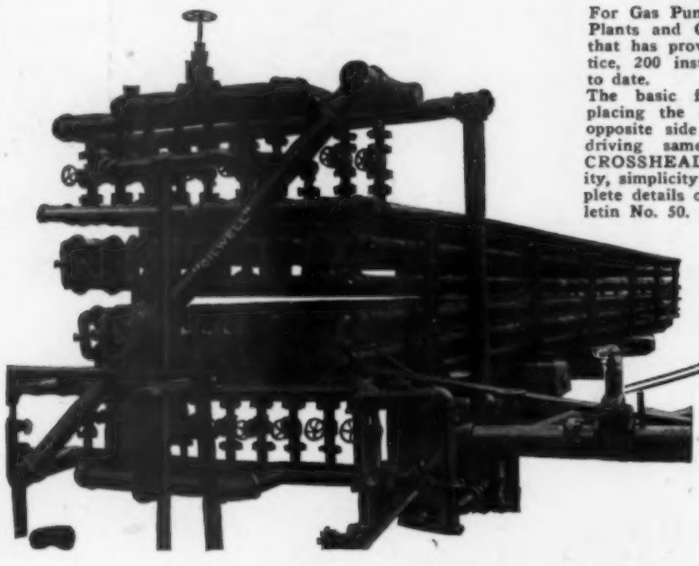

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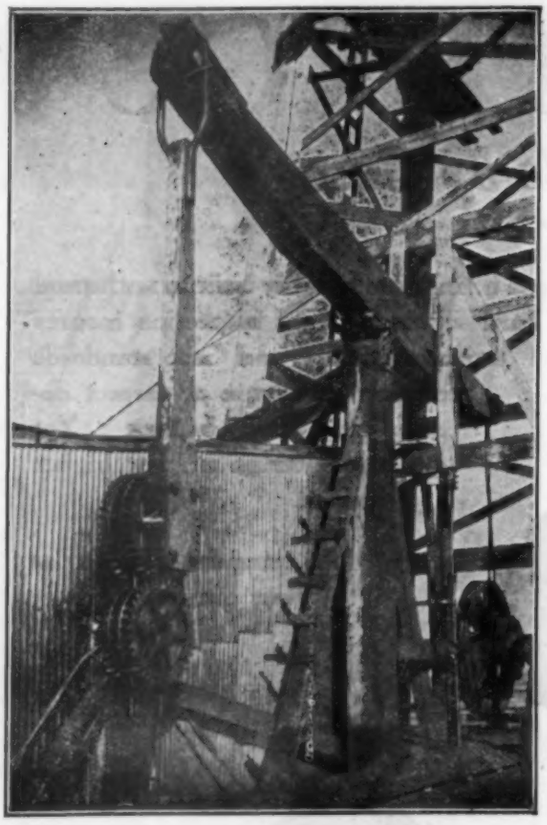

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Ohio Oil Company in Wyoming has three outfits in use.

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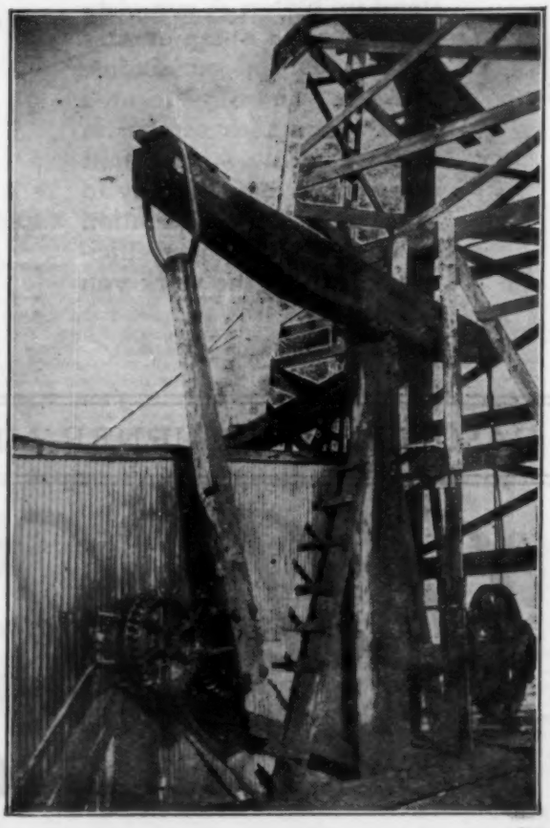

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Ignorance of the basic cause of cut oil has fostered ignorance as to its logical cure.

Yet its cause may be easily and briefly explained.

"Cut Oil" is petroleum and water containing substances which have the effect of causing the water to emulsify into the petroleum.

These substances receive the name of "emulsifying agents."

"Emulsifying agents" are not something new and mysterious. Chemists have long made use of emulsifying agents to bring about emulsions of liquids which will not normally mix.

They have long known that to make an emulsion an emulsifying agent must be introduced, while to break it the emulsifying agent must be so changed that its power is neutralized, destroyed, or removed.

Cut Oil is a true emulsion of petroleum and water. A number of years ago an expert chemist determined this fact and then set out to discover what substances cause such emulsions and how the properties of these substances may be neutralized, destroyed, or removed in an inexpensive and therefore commercially practical way.

Only one general means has ever been discovered of completely neutralizing, destroying or removing the power of emulsifying agents from emulsions. These emulsifying agents are always definite compounds, and they can be wholly defeated only through the use of other compounds.

The chemist mentioned above struggled with the problem for years before he was successful in developing a commercially practical method. His success, when it finally came, however, was thorough and triumphant.

The product he developed was Tret-O-Lite. It is merely mixed into the cut oil or tank bottoms under suitable conditions, and it promptly and completely defeats the emulsifying agents present. Petroleum and water return to their normal condition and separate by gravity. Their separation is complete. No B. S. remains.

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For further information address Wm. S. Barnickel & Company, St. Louis, Missouri.

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Vol. 33 SATURDAY, APRIL 12, 1924 No. 3

In this issue

What About Torrance

Because of the way production at Torrance is wigwagging, operators in California are guessing what will happen next. The field is up more than 10,000 barrels this week, but production for the entire state is the same as was reported last week. See page 45.

Along the Border

Estimated production of the Mirando district is that the field is making about 300,000 barrels of oil per month. The Laurel well is still holding up as the best producer in the district, and several other tests are going down. Page 51.

Gulf Coast

During the week, completions in the Texas coastal fields barely held their own. Production decreased approximately 1000 barrels. Statistics show that field activity has more than doubled itself since January 1. Page 52.

At Fort Norman

As soon as navigation opens on the northern rivers, a drilling crew will be sent north by Imperial Oil, Ltd., to resume work on the discovery well at Fort Norman, in western Canada. Considerable other work is being planned for the spring months. Page 54.

Along the Balcones

The first group of tests started recently on wildcat acreage in the Balcones-Mexia fault zone, extending in a northeast direction across the state from the Powell field, is drilling near the level where the Woodbine sand is expected. Page 67.

Past and Present

The second of two articles reviewing the part geology has played in oil development with predictions as to its future importance, begins on page 37.

Eastern States

Several days of favorable weather have brought much activity to eastern fields and much work is being started. Production shows a slight increase for the week. Page 55.

Regular Features

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KEY TO ABBREVIATIONS

Following is the explanation of abbreviations and signs used in drilling reports, completions, etc.: *—dry, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million cubic feet of gas; abn—abandoned; bbls—barrels; b. s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in—inches; loc—location; m—milling; N. S. E. W.—North, South, East, West; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudded; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—under reaming; wo—workover; wosr—waiting on standard rig.

Overdoing It

In efforts to bring about Standardization in oil field equipment some engineers say that there is a big danger of going too far. Standardization from an engineer's standpoint is explained in the article beginning on page 11.

Premiums

Indications in the Mid-Continent crude market point toward resumption of bonuses during the next few weeks. Better weather is being reflected in motor fuel demand. Markets on page 17.

More About Logging

One operator declares that there is no reason for inaccurate reports on wells drilled by the rotary method. How he secures his logs is told in the article starting on page 19.

Lease and Land

Large companies frequently find many obstacles in handling their lease and land departments. The Twin States Oil Company in Oklahoma has worked out a very efficient method of organization in these two departments. Their president tells about it on page 27.

New Gas Field

News has reached Shreveport recently of a big gas well in an entirely new area near Urania, in La Salle Parish. This well is in wildcat territory, located 45 or 50 miles south of the Monroe field. Page 53.

Lincoln County

Oklahoma developments brought the Stroud pool in Lincoln County to the foreground again during the week just closed. It looks as if Stroud may have a real oil field yet. Page 49.

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PIPE LINE TOOLS

Red-Head Pipe Tongs

Chain Wrenches

Fig. 5030

Carrying Tongs

Carrying Bars Fig. 5031

Spike Bars Fig. 5032

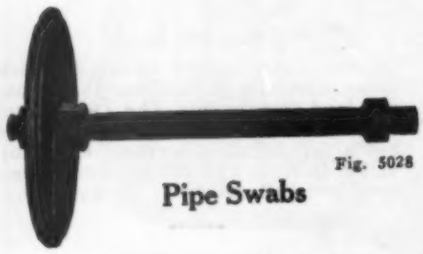

Fig. 5028

Pipe Swabs

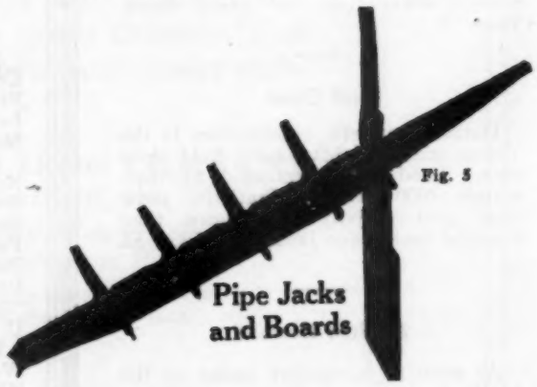

Fig. 5

Pipe Jacks and Boards

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Danger of Overdoing Standardization

Oil industry should be careful not to kill originality or retard efficiency

By Harry Pennington

STANDARDIZATION has been considered for many years by those within the oil industry that have to do with the selection, purchase and use of materials. Several large producers have standardized on certain makes of equipment so that repair or replacement will involve no greater expense than the part or machine itself. The machine receives a new part, or if the machine is replaced, the foundation is not altered.

That this method reduces all costs may be ascertained by examining the stocks carried in the field or refinery by one company that has numerous kinds of equipment and one that has only one kind, for doing the same work.

Loss in Big Stock

An illustration may be, for instance, gas engines. When several makes of engines are used by one producer, it is necessary to carry in warehouse stock repair parts consisting of pistons, rings, brasses, crank shafts, cylinders, heads, timing gears, valves, valve boxes, connecting rods, pins and the like for each make of engine. If there are four makes of engines, then there must necessarily be four sets of repair parts, which means that the warehouse stock is increased four times what it would be if only one make of engine were used.

In maintaining such stocks, there is some loss due to misplacement, improper marking, and the engines themselves may be replaced by some other kind of power so that the renewals then become a loss. The difficulty in keeping warehouse stocks in order, of transferring materials out and in for accounting and inventory purposes is known to every warehouseman and accountant that has to do with this part of the business.

Has Limitations

But this method of procedure is not within the scope of standardization; it limits the user to one class of equipment and denies the use of newer and better designs, favoring the designs already in use, and mayhap, non-competitive purchasing makes equipment cost more. Equipment changes from year to year for the better and a method of securing the benefits of better equipment, without discarding equipment that is still serviceable would fill this need.

Materials of manufacture and designs of oil field and refinery equipment are still in the formative stage; there are numerous patents covering devices of great value. For this reason, it is impossible to set up a standard of design, material or performance for equipment that is still highly specialized, although, if there were certain standards already set up, the designer would undoubtedly work to these as closely as possible. It is possible to set up definite standards of design, dimensions, materials, finish, only for the equipment that has been in use for so many years as to lose its specialized character, and in which the industry has adopted one general design as the most suitable.

To standardize upon design of specialized equipment is to limit or entirely stop improvement; improvement in equipment has advanced rapidly as wells are drilled to deeper horizons, as oil is being cracked, as the many other new things are being done, and any effort toward standardization that would deny the benefit of research and ingenuity would fail.

Much has been said about standardization in the Oil Industry and the American Petroleum Institute is now taking definite action toward the furthering of this plan. However, it has often been stated that in taking steps to standardize an industry is often inclined to overdo itself.

The accompanying article, while not expressing any opinion of The OIL WEEKLY, gives an engineer's viewpoint on what should be done.—The Editor.

Several other industries are standardized, but standardization in each case does not extend to the minutest detail; instead it throws about the machine in question certain customary things involving good practice, that are used by the designer if he can.

To make a beginning by setting up standards for materials, then selecting such equipment as can be brought within certain limits without detriment, is entriely practicable. Then, when new equipment is brought out, these standards set up a mark to which equipment might be brought, partially, if not entirely.

A material, structure, machine or process that does a new thing, or does an old thing in a new and better way, undoubtedly must take on a new design, but the materials of which it may be made could come within the scope of standardization, while the entire design probably could not.

Derricks

Probably the first structure that was erected for the oil business was the derrick, so let us begin on this.

There are many heights of derricks, and each height has many base dimensions, and each height and base derrick is built in weights for many different loads, but the design of all derricks has assumed the same aspect.

On the face of it, it looks like derricks are well taken care of, but, looking into it more carefully, we find that every operating company has its own derrick pattern with a lumber bill to correspond and every builder of steel derricks has his own patterns unlike those of any other. But steel derricks are more or less specialized at present, and covered with various patents, and therefore are not subject to exact specification.

It is impossible today to order a 112 foot rotary timber derrick or an 82 foot standard rig from a lumber yard or mill without making a complete list giving the dimension of each single piece of lumber. There are so many patterns that the mill is at a loss just what to furnish. The writer counted no less than sixty-two different derrick patterns on file in one company's yard; seventeen patterns covered a 112 foot derrick and twenty-one covered a 72 foot standard rig. An examination of the patterns in detail showed that every one of the 112 foot derricks was almost the same and that the lumber for each one would make a derrick that would be just as strong as any other one. The same held true of the standard rigs for pumping, but one specification had a few sticks of this or that different and the yard must stock these pieces in order to furnish his customers with exactly what they wish. This increases the yard cost of handling lumber and this cost is taken out of the producer.

In the saw mill, the good mill manager is that one who can run a log through and cut out of it the timber to which that log is best adapted. There may be some 2x10 No. 1, some 1x8 No. 2, or whatnot in the log; obviously, if a timber contains some No. 2, at one side, it will not go into No. 1, so the sawyer watches his step and as the log is exposed, exercises his judgment as to what stock should be made out of the log. If he knows when he saws a clear timber, 2x10x24, that it will find a ready market as derrick lumber, he can cut it so, but where a pattern must be sawed to order, and there happens to be no order at that particular time, the mill cannot continue to saw timber that might stay on the yard until it deteriorates, waiting for some particular customer to order again.

A lumber yard will not take an order for simply an 82 foot derrick; recently, several cars of lumber were rejected because the pattern that had been shipped contained a few sticks different from what the producer expected to get, although he had not set out his specification, and an examination of the dimensions of pieces in question showed that the patterns as shipped would have made rigs that were just as good and strong as the pattern expected by the producer.

While the mill lost on this transaction, still the mill must operate at a

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R. L. DUDLEY, Publisher.

TITUSVILLE GAS ENGINES

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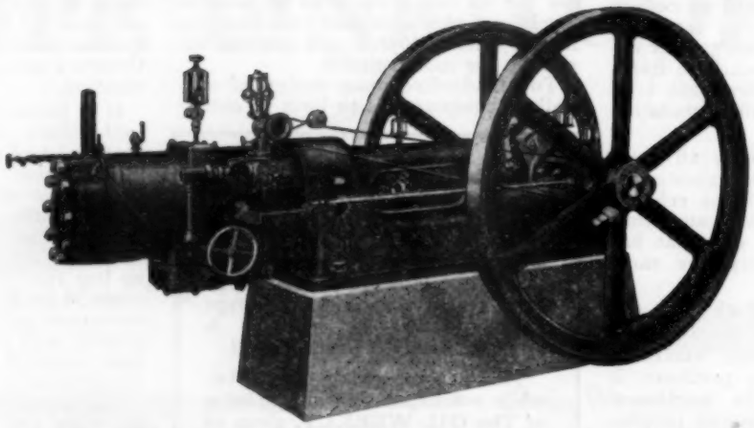

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TITUSVILLE, PENNA.

BIRTHPLACE OF THE OIL AND NATURAL GAS INDUSTRY

profit. The producer did not pay this loss directly, but such losses are a part of the manufacturing cost of lumber and are reflected in the cost of lumber, so that the oil industry as a whole pays the loss.

Patterns Differ

Rig builders frequently have their own patterns and one rig builder's pattern differs from another. Some producers leave the derrick design to their rig builder. A certain rig builder becomes accustomed to one pattern and his employees learn to build that pattern best. Then, when this rig builder moves to another field, he, along with his contemporaries, takes his pattern along with him, thus establishing still more variety of patterns, in which there may not be any difference in strength of derrick, but in which there is sufficient difference in design to complicate the lumber yard stock.

And, when this rig builder and employes set out to build a derrick according to some company's pattern, his employees perhaps may not be as familiar with that pattern as the one on which they have been working, so that the derrick may cost more to build than is necessary.

Then where is the advantage in each company, and each rig builder having an individual derrick pattern? And where is the advantage in one locality having a different derrick pattern from another locality, when the lumber is shipped from the same timber district? There is no advantage; to the contrary, there is every disadvantage; shipments are not facilitated; yard handling is hampered; building is hampered, and the result is a generally higher cost, which the industry as a whole pays, in one way or another.

Many Sizes in Derricks

Now as to a standard timber derrick. For cable work, there are many sizes for drilling, but these could be reduced to say three, using the depth of well as the measurement of strength and height necessary in a derrick and the size of rig irons and timbers necessarily accompanies the depth of well. Wells under 2000, wells 2000 to 3500 and wells 3500 feet and deeper might be a division that would assist in reducing the number of sizes of derricks, then reducing the number of patterns of the size. Some users wish a 24 foot base in an 82 foot derrick; others a 20 foot base; both patterns have various widths of water table; some as small as four feet and others as much as five feet four inches to accomodate a certain make of crown block.

There is evidently just one derrick that is best for a certain depth of well; to design this derrick in all its proportions, and affix an identifying number, does not seem to be a hard task, but when the industry itself demands variegated patterns and will have no other, there is no possibility of standardization.

Would Reduce Cost

With such a standard design, the handling of derricks from the log to the finished structure would be facilitated, the cost would probably be reduced at once, surely in time.

For rotary derricks the same observations hold true and rotary derricks are subject to the same standardization as cable drilling or pumping derricks.

The quality of lumber itself is subject matter for standardization. Undoubtedly derrick lumber should be of good quality, but there are timbers of short leaf yellow pine that give as good service as long leaf. The measure of strength is not wholly on the scale of short versus long leaf, since dense short leaf is equally as good and strong as equally dense long leaf.

A standard specification to suit the materials best obtainable for each district; yellow pine for the central fields and other woods for western, based upon tests of the various materials, made to duplicate working conditions, by which the manufacturer and purchaser alike may be guided, would establish a method of exchange between the two industries that would be of benefit to both in many ways.

And other details of derricks such as nailing, foundation, guys, anchors, are matters that come within the scope of standardization. There is one best method to ascertain this method and to set it out in detail and fix it as a standard is within the province of standardization.

Proper Treatment

There is no standard method of taking care of derricks; whoever saw a derrick painted all over? We paint everything else, but the derrick never has had such attention, although if the joints and surfaces were protected longer service could be had.

In steel derricks one manufacturer shows no less than 60 different designs. There is no reason for this multiplicity of pattern only that the trade will buy them. It is obvious that a manufacturer of 60 different derrick designs is unable to place his business upon a production basis, when, if the producer would limit his requirements to a few derricks the manufacturer could place a few on a production basis and the price of steel derricks without question would reduce—not a great deal but still would reduce some.

Not Possible Here

Steel derricks are still specialized under patents and it would not be possible to establish a given standard of dimension and weight for each piece at the present time. But, as patents expire and this class of derricks come into general use and general manufacture, a standard could then be adopted to the benefit of the producer.

Leaving derricks, let us pass to a highly specialized piece of equipment, selecting the rotary. It is impossible to say to the designer or inventor that he must make the table of an exact diameter, the races and cones of exact dimensions, when he may be able to use a lesser, or to make a rotary that will screw up pipe, he may be compelled to use a larger diameter To limit or fix the dimensions of a highly specialized piece of equipment means that we limit the designer and the inventor, which would stop improvement. Any limitation placed would not be regarded anyway because a decided improvement would override any standard.

In such specialized equipment, the designer must have free scope to use the best of his talent in whatever direction that offers improvement and to place any limitation upon his efforts would be to place a limitation upon progress.

But it is entirely possible to set up a specification of materials as to the quality of steel or iron used in castings, the quality, finish or hardness of cones and races, the quality, finish, accuracy and heat treatment of the pinion shaft, which would assist the designer in selecting the specification that suits the requirement best.

In specialized equipment, this is as far as standardization can go; not only will the user but also the designer refuse to adopt a specification that on its face is of no benefit.

But, as new equipment is brought out, when there are specifications set out that might possibly be used at the inception, and these are available to the designer, there is some likelihood of such specification being used as far as possible even in specialized machines.

No Limit

In refinery equipment, standardization can go only so far as it does not limit initiative. There are many parts of equipment that may be standardized in every dimension, finish and material, but there are others that are still specialized so much that not only would a standard be rejected, but a standard would prove of no benefit.

We can see, however, that a standard that is applicable to plates, rivets, pipe, cement, structural steel, brick, sand and what not, is practicable and of benefit.

The products of the refinery are not susceptible to standardization; oils from various fields have widely different characteristics so that one crude makes a product suitable for one purpose and another for another purpose. But there is a great deal of room for standardization of testing methods. For an illustration, let us take up the most frequently used test, that of the initial and end point of gasoline. One chemist may run the temperature up fast and another up slowly and the difference in initial boiling point thus obtained affects and might cause rejection of the shipment. This test is relative anyway. The initial boiling point is not the temperature recorded by the thermometer, since when temperature is recorded by rising vapors, the initial boiling point has been reached before, perhaps as much as 10 seconds, and by the time vapors have reached the thermometer bulb, the vapor temperature will have lowered. When the vapors ascend, it is evident that the initial boiling point will read low, due to this, but when the vapors go over and condense quickly the thermometer has not had sufficient time for the mercury to rise to the correct point. There is not much latitude in this test, but there is some.

The same may occur when securing the end point; there can be a difference of five degrees in the end point when two chemists in two different laboratories are making a test of the same gasoline.

Must Specify Method

Observing these tests run in a refinery and also at an export terminal, many rejections are simply because the refinery chemist has some latitude and the export terminal chemist also has some latitude, and under these testing methods, if one takes latitude in an opposite direction from the other, there arises a difference that costs money in rejections, when both chemists may

Five Tests to Start in Colorado As Soon as Weather Will Permit

Denver, Colo., April 7.—Materials are being assembled at the town of Craig for five tests to be started as soon as weather permits in the vicinity of the high gravity wildcat producer brought in last January by the Texas Production Company and the Transcontinental Oil Company on the Hamilton Dome in Moffatt County, Colorado. Two of the tests are to be drilled jointly by Texas and Transcontinental, while the former is to drill three additional tests. According to reports from Craig, the weather began warming up during the past week and a few days of sunshine softened up the snow banks that have accumulated during the past winter along the road leading up to the wildcat producer. It is believed that the snow will be melted sufficiently by May 1 to begin dragging materials over the 15 mile stretch from Craig to the area to be tested out by the five drilling outfits, and that drilling will be in progress before June 1. Owing to the comparatively few months in the year that climatic conditions are favorable for wildcat operations in this section of the state, preparations are being made to start operations at the earliest possible date and to have some of the tests completed before the close of the summer months.

The location of the above five proposed tests will be made so as to almost circle the present producer, which is in section 33-5N-91W. According to present plans, the Texas Production Company's first test will be on a state lease to the south of the discovery well, another directly north, while the third will probably be north and slightly east of the producer. The remaining two tests to be drilled on the dome will be located northwest and southwest of the completed oil well.

The discovery well was completed January 10, 1924, with a total depth of 3820 feet, and has been shut in since a 27 hour gauge was taken on the production from 7 a. m. March 2 to 10 a. m. on the following day, during which time the well averaged 190.84 barrels per hour with a steady flow of about 41 gravity oil.

The problem of disposing of the crude now available from the discovery well of the Moffatt pool and the production obtained in the future from other wells is being given serious consideration by the officials of the two companies that brought in the producer. Estimates on the cost of a proposed pipe line from the Moffatt pool to refining centers in Wyoming are placed at $1,500,000, while in the meantime two railroads are trying to interest Texas and Transcontinental into moving the crude to market in tank cars. It is also reported that some thought is being given toward the erection of a refinery near the field, and distribute the refined products throughout the district in tank cars.

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be doing their best and one may be fully as competent as the other.

There are so many methods of taking viscosity, color, and other characteristics of refined oils that the buyer or seller must specify what method. The seller must have duplicate instruments as well as the buyer.

A carefully prepared standard of distillation apparatus, setting out the dimensions of apparatus, height of flame, type and size of burner, pressure of gas to correspond to fuel used, distance of flask from flame, time allowed for coming over, distance thermometer is down in flask, weight and kind of cotton used on thermometer, so carefully set out, without any latitude whatever, would enable any competent chemist anywhere to arrive at the same results when testing the same oil.

Rejection losses, while they may fall upon a few, are reflected upon the whole of the industry and are an avoidable loss. To avoid rejections some refiners run their end point well under requirements, whereas, if they could run closely to specification without fear of rejection, a better recovery of the more valuable fractions would ensue.

Not only are materials and designs subject to standardization, but field practices are also. Take for instance in the pipe line department and particularly connections to producers tanks of which there are many thousands all over the country. It may be safely stated that an individual producer's tanks will have many pipe lines to receive oil from the same battery, that is, he will change from one pipe line to another many times during the years that his lease produces oil. When the producer changes pipe line, the procedure, for the most part is for the one line to take out its base line, cocks and fittings and the next pipe line then sends in its connection gang and lays another base line and installs other fittings and cocks, solely because the two lines did not use the same valves, fittings and the base line design of the one company did not correspond to the base line design of the other, while one design would take oil just as good as the other. The expense of taking out and putting in new tank connections is frequently more expensive than the fittings and base line themselves. In every field, especially where leases are in small parcels, there is a continuous expense for connection gangs that is avoidable. This expense comes out of the industry as a whole; these gangs could be used in other directions for doing productive work.

Then why not a standard base line and when a battery is connected once allow the same base line to serve and remain in place as long as the battery of tanks is used?

And thermo-hydrometers. The writer has seen four gaugers, each with his own thermo-hydrometer, secure four different gravities and temperatures of oil from the same gravity jar and one gauger's measurement made the oil higher in price and every gauger claimed his instrument was correct. This evidently sets up friction between the gauger and the farm boss. It is a very simple matter to use instruments calibrated to the same standard, and checked as often as necessary to insure that such instruments are remaining accurate.

The thousands of varieties, sizes, colors, weights of the thousands of kinds of materials and equipment amounting not to millions, but billions of dollars, used by the industry, the many practices, might all be treated in turn as the derrick, rotary and oil testing have been treated in this article. Standardization means cash profits now; it means stabilizing the industry against useless expense which it may need in times of stress. If a practice wastes a little money every day, the waster himself is not the only loser; his waste is reflected upon the whole industry and the profits of every individual are affected directly or indirectly.

Arriving at a set of standards is within the province primarily of technicians, but these must have the assistance of the president, directors, superintendents, drillers, stillmen, pumper, the laborer, even down to the office boy, who frequently is an embryo executive.

Only careful, mature consideration by those competent to do such, will standardization take on the weight and importance sufficient to establish just regard for such standards.

Eventually the industry will become as highly standardized as some other industries are today, but at the present time there is no unity, although the American Petroleum Institute has begun the work. The work will never be finished, but will be added to continually, to the great advantage of everyone interested either directly or indirectly in oil, including the consumer, which includes every man, woman and child of the world.

Eldorado Operator Must Answer Federal Charges

Texarkana, Texas, April 8.—Proceedings were started today in federal court for the western district of Arkansas, against Pat Marr, Eldorado oil promoter, whose operations are said to have involved millions of dollars and seven co-defendants. Using the mails to defraud in carrying out the various schemes in connection with operations of several Marr oil companies, is charged.

Evidence presented on the first day of the trial consisted of certified copies of the deeds of trust and incorporation papers in the Marr companies. No witnesses were put on the stand.

Defendants being tried along with Marr are George M. Ferrell, W. E. Akin, J. H. Ingram, Hy Garland, George W. White, W. T. Earnest and the Mid-Continent Brokerage Company.

Pittsburgh, Pa., April 7.—All contracts have been signed between the Venezuela Gulf Oil Corporation, a South American subsidiary of the Gulf Oil Corporation, and the Creole Syndicate by which the Venezuela Gulf will drill wells on Creole Syndicate holdings in Venezuela.

Oklahoma City, Oklahoma, April 8.—Collections for the first quarter of this year from the state three per cent gross production tax totaled $1,319,177.33. Penalties collected during the first quarter were almost $10,000.

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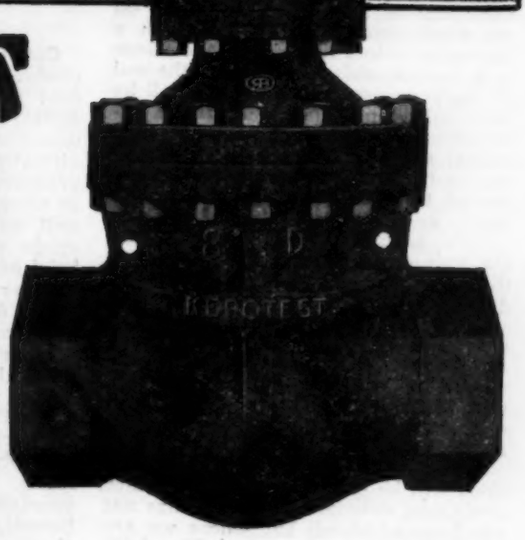

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International Petroleum Preparing To Step Out in South America Fields

Toronto, Ont., April 4.—A. M. McQueen, vice president of the International Petroleum Company of Toronto and of its controlling company, Imperial Oil, Ltd., returned on Thursday from his annual inspection trip of the International Petroleum Company holdings and properties in the South American fields.

Mr. McQueen spent three months in South America, where he found business conditions considerably restored from the depression of the year previous. The commerce of most of the republics was steadily improving and, taking the continent as a whole, there was remarkable freedom from political disturbances. The nitrate industry of Chile was an example noted by Mr. McQueen. Last year it was absolutely stagnant. The rebound has been both rapid and sustained.

"Very few potential oil fields have presented the physical obstacles to development such as we experienced in the republic of Colombia," said Mr. McQueen, "but we have now reached a point at which most of these are behind us. That is to say, we have placed ourselves in a position to carry on the development of the field with a minimum of lost time. Our operations in both Colombia and Peru to the end of the year were reviewed in detail by Mr. G. H. Smith, president of the International Petroleum Company, at the annual meeting of Imperial Oil, Ltd., and so there is nothing new I can say except to mention the later developments in Colombia.

"We have purchased an additional six strings of rotary tools and when these are set up and our drilling program is in full swing, we will have 13 strings of rotary tools and seven strings of standard tools in operation. An intensive drilling campaign will be carried on in the already proven territory where we are sure of getting production which will materially increase the present crude output of the field.

"At the same time drilling operations will be extended to several other geological structures where oil has not yet been obtained, but where we are reasonably sure of results. The drilling department has been reorganized under very efficient administrative heads and altogether our entire organization in Colombia is in excellent shape, and we confidently look for considerable progress this year.

"Our present refinery at Barranca, which is constructed to care for the domestic needs of the country, is running about 1500 barrels of crude per day, so that the balance of our production, amounting to some 3000 barrels, must necessarily remain shut in until an outlet for it can be created. Our program, of course, calls for materially increasing the present production, which is only a bare beginning. After thorough investigation it has been definitely decided that the barging of oil from our property down the Magdalena river to the sea is not feasible, and that a pipe line is the only possible means of transporting oil in quantity.

"Since the end of the year we have put all our drilling equipment in Peru into operation and opened up all wells to capacity, and the production is steadily increasing. For the month of March our production averaged over 19,000 barrels per day, and today is about 20,000 barrels. We have a large area of promising proven territory to drill so that the present production will be maintained and in all probability increased.

During the last month we have been advised that our applications for new concessions have been definitely granted by the Peruvian government. The survey of these concessions is now being proceeded with and as soon as formal possession is given, drilling operations will be carried on. These new concessions adjoin our present property to the south, east and north. Our present La Breay Parinas estate comprises over 400,000 acres. The total acreage of our new concessions which have been granted amounts to about 700,000 acres. These concessions have been carefully examined by our geologists and offer promise of good production.

"Our organization in Peru is in a high state of efficiency. Owing to the character of the country our problems are not so difficult as those in Colombia and as a consequence results are more readily obtained."

Suit Filed to Recover Big Acreage in Orange Field

Orange, Texas, April 11.—Subpoenas are being served by the sheriff's department of Orange County on hundreds of witnesses in the case of O. W. Burton in behalf of his father, Rev. F. A. Burton et al against the Sun Company, Mrs. Carrie Brown, E. W. Brown, Jr., H. A. Moore and numerous others. The suit is an attempt to recover possession of 320 acres of land, and damages, in the Orange oil field.

Damages amounting to $1,010,000 are being asked.

The land in dispute is located in the Aaronson-Nelson, and the Bradley-Garner survey.

Output at Corsicana-Powell Reaches 39,945,000 Barrels Since January, 1923

Corsicana, Texas, April 8.—The total production of the Corsicana-Powell field up to April 1 amounted to 39,945,000 barrels since the deep pay was discovered in January, 1923, while virtually all of this crude has been produced within the past nine months, or after the completion of the first big well last May. This high record on crude yield in such a comparatively brief period of time is accompanied by another record on recovery per acre, as the field is credited with having produced approximately 17,830 barrels per acre up to April 1. The field is slightly more than seven miles in length, and has an average width of approximately one-half mile, making a total of about 2240 acres in the producing area. Actual pipe line runs from the various leases in the field during March amounted to approximately 4,036,000 barrels, and a noticeable gain over the short month of February because of the unusual flush production obtained from a few wells in the Hill tank farm section of the field.

This Hill tank farm section of the Corsicana-Powell field has established a new record on a single well production, as John W. Hooser et al's Hill 1 has produced around 400,000 barrels of oil since it was completed on March 2 flowing better than 25,000 barrels initial, and during the first 22 days after being completed pipe line runs totaled 306,309 barrels of pipe line oil. Except for the first five days' pipe line runs, the crude from this well has commanded a posted price of $2 per barrel. This big well was flowing more than 6000 barrels of oil early this week, and has maintained its flow longer than the average well in the field, which is about four weeks after being drilled in.

Stroube and Stroube's Hill tank farm 3 was drilled in Sunday, but failed to flow natural and when placed on air produced about 2000 barrels daily. Mills Bennett's two completions on the K. Wollens tract, located on the west edge of the Hill tank farm section, were credited with holding to about 15,500 barrels daily early this week. The total production for the field Monday was placed at 128,000 barrels, with a number of additional tests in the Hill tank farm section nearing the producing horizon for completion.

The Richland area in the lower part of Navarro County, and between the Corsicana-Powell and old Richland field, is not proving up to expectations. The Godley Oil Company's Allison-Gordon 1, located only a short distance southwest of the discovery well on the Brown lease, is showing for a very small pumper after logging sandy-shale pay from 2935 to 2965 feet, with a total depth of 2966 feet. In the same direction from the discovery well, the Sun Oil Company's W. P. Brown 1 is bailing at 2917 feet with a small show of oil. This latter test picked up the Austin chalk at 2056 feet, and was generally considered to be located on the high part of the structure. In a northeast direction from the discovery well, the Boyd Oil Company's Allison 1 has spudded, while a southeast offset being drilled by Meade et al on the C. M. Graves lease is drilling below 500 feet.

The fourth attempt made by The Texas Company to develop a producer from the Woodbine sand on the J. R. Stroud land, near Groesbeck and south of the Mexia field, proved futile, and orders to abandon the test were issued last week after bailing salt water at 3134 feet. This test had a good show of oil and gas, as was found in the other tests drilled on the same lease, but not in sufficient quantities to make a well. It is generally believed that a producing area exists in this particular area, and all the companies are paying lease rentals on their acreage for protection in the event production should be developed from the Woodbine.

Expect Resumption of Premium Paying

Market picking up in Mid-Continent as better weather starts gasoline buying

Tulsa, Okla., April 9.—Within the next ten days to two weeks there may be expected a resumption in part of the practice of premium paying in Oklahoma and possibly Kansas on a more extended and higher scale than has obtained for the last three weeks to a month. What makes this prediction a reasonable certainty is the change in weather which has come about within the last seven days. Warmer days apparently are here which means an impetus to gasoline consumption.

There still is a sort of lull in the crude market in Oklahoma. The posted price scale appears to be high enough for a majority of the independent crude buyers who are continuing to exercise caution and prudence in their crude takings. In Kansas the crude situation remains unchanged with the available supply in active demand but going at no bounty to speak of.

Increased activity marks developments in the Osage and in Seminole County with Lincoln County in Oklahoma still commanding considerable attention. What effect these areas will have this summer on the crude market is a matter for conjecture but there are those who believe that by the hot weather season crude production in Oklahoma will have attained the 425,000 barrel mark or even higher. There is a possibility that this figure may be too low for much of the area in Seminole and all of the Lincoln County territory remains to be thoroughly tested and as yet cannot but be regarded only as a potentiality. Both counties, however, look unusually good at this time.

In the Osage there now are some 470 to 475 wells that are working or soon will be working which means that the Burbank field now is more active than at any time since last year when developments were at the peak. There is a spirited contest on among the companies in the Burbank in the matter of line wells. Companies who purchased acreage in the Burbank are rushing in rigs and moving in tools as the rigs are completed. It is expected that some of these wells will be put down in record time, if not actually completed ahead of the planned schedule. All of the companies are pushing their field men at top speed these days.

Cosden Pipe Line Company is stringing a line of 4-inch pipe to connect with the production of Mutual Oil Company in sections 1 and 2-22-10e in the Osage. This line will connect with Cosden's main carrier in section 19-22-10e. It is understood that Cosden is to pay a premium for this oil, the premium to be as high as 20 cents a barrel. Mutual has some 60,000 barrels of crude in storage on its leases in the Osage and although nothing official is known as yet it is presumed that Cosden also will run this oil under the terms of the existing agreement.

Another company in Oklahoma that usually is active in maintaining a sufficient supply of crude for its refineries is the Johnson Oil Refining Company of Cleveland, Oklahoma. Johnson is understood to be paying a premium for oil in the Osage ranging in price from 15 to 25 cents per barrel. This company operates a refinery at Cleveland with a rated capacity of 3000 barrels.

Shaffer Oil and Refining Company, another company that has been active in premium paying in the central Oklahoma fields, still is paying a bounty for its crude but late reports from the field are that their price above the posted schedule has been brought down from 25 cents a barrel to as low as 10 cents a barrel. Shaffer operates a refinery at Cushing with a rated capacity of 6500 barrels. The company purchases a large portion of its outside crude in the Cushing district.

CONDENSED U. S. PRODUCTION

	Past Week	Prev. Week
Mid-Continent, (Oklahoma, Kansas, North Texas)	775,820	764,165
California	654,000	654,000
Texas	381,310	388,460
Oklahoma	426,195	410,850
Mountain States	123,000	125,450
Arkansas	119,840	124,890
Eastern States	100,000	98,000
Kansas	71,045	71,180
Louisiana	49,570	54,765
Total	1,924,960	1,927,595

Another evidence of the gradual improvement in the crude market situation in the North and East and Middle West is the report of the Prairie Pipe Line Company for the month of March which has just been made public. March shipments of the Prairie showed an increase over the amount of crude oil transported in February to connecting lines North and East, the gain for March being 213,539.73 barrels for the thirty-one day period. April shipments are expected to be well above the March total as traffic over the company's system out of the Mid-Continent is showing steady gains at this time.

Talk in New York and in the West of considerably higher prices for crude oil this summer and fall is being repeated here with interest but is not being wholly accepted at its face value. Some predictions have ranged as high as $3 oil by mid-summer for Mid-Continent grades. Another advance this month still appears probable, although there is small likelihood of the schedule being changed more than once during April, unless unforeseen market conditions set in which do not now seem likely.

Refinery activity in the Mid-Continent at this time is quiet insofar as expansions and building programs are concerned. This accounts partially for the slack period during the last three weeks to a month in the crude oil situation and in turn may be attributed to the winter hang-over weather that has prevailed in almost all sections of the Middle West, Northwest and upper Southwest until the last seven to ten days.

With warmer days ahead there should be better days ahead for the producer as well as the refiner.

Gray Says That Crude Prices Will Go Higher

St. Louis, Mo., April 11.—Still further advances in the price of crude are inevitable, W. H. Gray told members of the National Petroleum Marketers Association in convention here Tuesday, during a discussion of the price structure in which the jobbers were seeking a solution to the present situation of a strong crude market and weak refined structures. Gray said that only a few companies have crude in storage and that by August these stocks will be drawn upon at the rate of at least 10,000,000 barrels per month.

His explanation of the present weakness of gasoline is the desire of refiners to hold both gallonage and crude connections. Refiners would rather run crude at a loss than give up their crude connections, the inference being that if some of the oil taken by independent refiners was released to those large purchasers who are now drawing on storage, the price of gasoline at the refinery would adjust itself to a proper relation with crude prices. The purchasing companies who are not connected to refineries are conserving their crude, he said, and the price will advance as the draft on storage becomes more apparent.

Counsel for Receivers Named in Teapot Case

Cheyenne, Wyo., April 7.—Inability of the receivers of the Teapot Dome naval reserve to agree on certain legal problems has led Federal Judge T. Blake Kennedy to name William E. Mullen of Cheyenne as counsel for the receivers.

The following statement has been given out by A. E. Watts, vice president of Sinclair Consolidated Oil Corporation, and one of the Teapot Dome receivers:

"I have been appointed by Judge Kennedy one of the receivers for the property in litigation known as the Teapot Dome. This appointment was made on the recommendation of the defendant. I shall however in performing my duties have nothing in view excepting the preservation of the property, so that if the government shall succeed it will receive all that it is entitled to, and if the defendant shall succeed it will receive its entire property in the best form. I have and shall have no other policy than that. The court will of course decide the program of operation of the property."

CRUDE OIL PRICE QUOTATIONS FOR ALL FIELDS

April 3.—Effective today, the Standard Oil Company of Louisiana posted an advance of 20 cents in the price of Bellevue crude. No other crudes were affected by the new posting.

EASTERN STATES

	Apr. 12 1924	Apr. 14 1923
New York Transit	$4.50	$4.00
Bradford (Pa.)	4.50	4.00
Other Pa. grades	4.00	3.75
Cabel	2.20	2.41
Ragland	1.10	1.10
Corning	2.15	2.15
Somerset, medium	2.50	2.20
Somerset, light	2.30	2.45

CENTRAL STATES

Illinois	$2.07	$2.28
Indiana	2.08	2.28
North Lima	2.28	2.48
South Lima	2.28	2.48
Plymouth	1.45	1.65
Lodi	1.80	...
Princeton	2.07	2.28
Waterloo	1.55	1.75
Wooster	2.15	2.50
West Kentucky, light	2.21	...
West Kentuck, heavy	2.01	...

MID-CONTINENT

(Prairie Prices)

Below 30 grav.	$1.25	$ ...
30 to 32.9 grav.	1.45	...
33 to 35.9 grav.	1.75	...
36 to 38.9 grav.	2.00	...
39 gravity and above	2.25	...

(Magnolia Prices)

Below 28 grav.	$1.00	$ ...
28 to 30.9 grav.	1.20	...
31 to 32.9 grav.	1.45	...
33 to 35.9 grav.	1.75	...
36 to 39.9 grav.	2.00	...
39 gravity and above	2.25	...

NORTH CENTRAL EEXAS

Corsicana, light	$2.00	$1.50
Corsicana, heavy	1.00	.90
Thrall	1.00	1.90
Mexia	2.00	2.00
Currie	2.25	2.40
Rockdale-Minerva	2.00	2.00

SOUTH TEXAS

Mirando	.80	.75

SOMERSET

Below 33 gravity	31.15	$ ...
33 to 35.9 gravity	1.40	...
36 to 38.9 gravity	1.60	...
39 gravity and above	1.75	...

GULF COAST

Grade "A"	$2.00	$ ...
Grade "B" at Blue Ridge, Hull and Pierce Junction	$1.70	...

LOUISIANA-ARKANSAS

Caddo

38 gravity and above	$1.85	$ ...
38 to 37.9 gravity	1.75	...
32 to 34.9 gravity	1.65	...
Below 32 gravity	1.50	...

Homer

	Apr. 12 1924	Apr. 14 1923
35 gravity and above	1.85	...
33 to 34.9 gravity	1.75	...
31 to 32.9 gravity	1.65	...
Below 31 gravity	1.50	...

Haynesville

33 gravity and above	1.75	...
Below 33 gravity	1.65	...

Bull Bayou

38 gravity and above	1.80	2.00
35 gravity to 37.9 gravity	1.65	1.90
32 to 34.9 gravity	1.50	1.85
De Soto crude	1.85	2.20
Crichton	1.65	1.85
Bellevue	1.75	1.35
Jennings	2.00	1.50
Vinton	2.00	1.50
Edgerly crude	1.80	1.50

Smackover

	Texas Co.	Standard of La.	
26 gravity and above	$1.25	$1.35	...
25 to 25.9 gravity	1.10	1.20	...
24 to 24.9 gravity	1.00	1.10	...
Below 24.0 gravity	.85	1.00	...

El Dorado

33 gravity and above	1.85	...
Below 33 gravity	1.85	...
East Field (Calion)	1.00	...

Stephens District

(Posted by Atlantic Oil Company 1-10-24)

28 gravity and above 60 degrees	$1.40	...
26 to 27.9 gravity at 60 degrees	1.35	...
23 to 25.9 gravity at 60 degrees	1.20	...
Below 23 gravity at 60 degrees	1.00	...

WYOMING-MONTANA

Wyoming

Elk Basin	1.95	2.10
Grass Creek	1.95	2.10
Rock Creek	1.70	1.75
Lance Creek	1.90	2.10
Mule Creek	1.10	1.50
Big Muddy	1.50	1.65
Salt Creek	1.60	1.65
Osage	1.90	2.10
Hamilton Dome	1.60	1.65
Pilot Butte	1.25	1.40
Landers	.70	1.30
Torchlight-Greybull	1.95	2.10

Montana

Sunburst	1.05	...
Cat Creek	1.95	2.10

CALIFORNIA

(Crude oil prices at well, 2-6-24.)

Los Angeles and Orange Counties

14 to 19.9 gravity	$1.00	$ .60
20 to 20.9 gravity	1.01	.62
21 to 21.9 gravity	1.02	.65
22 to 22.9 gravity	1.03	.70
23 to 23.9 gravity	1.05	.75
24 to 24.9 gravity	1.07	.80
25 to 25.9 gravity	1.10	.85
26 to 26.9 gravity	1.13	.90
27 to 27.9 gravity	1.16	.95
28 to 28.9 gravity	1.19	1.00
29 to 29.9 gravity	1.22	1.05
30 to 30.9 gravity	1.25	1.11

	Apr. 12 1924	Apr. 14 1923
31 to 31.9 gravity	1.28	1.17
32 to 32.9 gravity	1.31	1.24
33 to 33.9 gravity	1.34	1.31
34 to 34.9 gravity	1.37	1.38
35 gravity and above	1.40	1.45
Fuel Oil	1.40	...

CANADIAN CRUDE

*Petrolia	2.68	2.98
*Oil Springs	2.75	3.05

*Plus 2½ cents bounty.

Corona Wildcats Down To Considerable Depth

Tampico, Tamps., April 11.—Two wildcat tests of the Corona, in Comales and San Isidro, are down to what is considered considerable depth for a well in Mexico. The former well is fishing for parts of a rock bit cone at 1650 feet in shale and shell, and the latter is drilling in the same formation at 2570 feet.

Mexican Sinclair Brings In Big Well in Cacalilao

Tampico, Tamps., April 11.—Late last week the Mexican Sinclair Petroleum Company brought in its No. 34 well for an approximate production of 6000 barrels. The well is located on lot 3, fraction 8, Cacalilao, and was completed at a depth of 1620 feet. It will be hooked up and flow through the Sinclair's station No. 2.

No. 34 is located a little north of No. 16, recently completed for 5000 barrels, but since gone to salt water. The company has made several other locations in the vicinity of No. 34.

Aguila Taking Core in Its Wildcat Test in Amatlan

Tampico, Tamps., April 11.—The Aguila is taking a 100 foot core of its well No. 24, lot 132, Amatlan. The core is being taken by a diamond drill owned by Sheldon, Burden & Company. Drilling is below 3370 feet.

International Gets Good Well After Two Dry Holes

Tampico, Tamps., April 11.—After having completed two failures recently, the International Petroleum Company brought in a 1500 barrel well in its No. 57-A. This well is located on lot 4, fraction 1, Cacalilao. It struck the pay at 1851 feet.

Los Angeles, Calif., April 5.—General offices of the Tubbs Cordage Company at San Francisco have been removed to 200 Buch Street, effective April 1.

London, Eng., April 1.—The Danish-Palestine expedition in the valley of the river Jordan is said to have discovered iron and petroleum.

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Methods of Logging Rotary Drilled Wells

Ordinary care all that is necessary to keep formation depth records straight

By Edgar Kraus

Before American Association of Petroleum Geologists

THE most frequent criticisms of the rotary method of drilling heard among geologists is that inaccurate logs are supplied when this method of drilling is used.

That poor and inaccurate logs often result when wells are drilled by rotary cannot be laid entirely upon the method. It has been the experience of the writer that more often the drillers are responsible for poor or incorrect logs instead of any inherent impossibility of obtaining good logs with the rotary system of drilling.

The instance so often cited to prove the inability of the rotary to give a reliable log, namely the greater number of recorded changes in formation in a cable tool well drilled at the side of a rotary drilled well, is hardly conclusive. A similar difference will often result in two rotary holes drilled side by side, in one case by drillers who make an effort to obtain a good log and in the other by drillers whose one aim is to "make hole."

It is possible to recognize small changes in formation and log them, if the driller's interest in this phase of the work is aroused. It is noteworthy in this connection that the mere presence on a derrick floor of a geologist, or any other person especially interested in formation, during the drilling of a week will result in better logs. The driller's attention is focused by this means on logging and he makes a special effort to identify his formations correctly.

Measurements

There is no excuse for inaccuracy as far as measurements are concerned. The depth at which formations are encountered can be kept correctly to within two or three feet if ordinary care is exercised. The method used by drillers is to keep a record of the drill stem in this fashion: The Kelly Joint (about 30 feet long) is first drilled completely down and ever after in all measurements and computation is considered to be in the hole,—as worded by the drillers, "The Kelly is 'down.'" Then as each fourble of drill pipe (four joints which total about 85 feet in length) is added, it is measured. The exact depth of the hole is then known when each fourble is "down;" i. e. when the Kelly joint, including all the fourbles, has been entirely put into the hole.

Between the depths at which fourbles are connected the "grayhound" is used. This consists of three lengths of drill pipe, usually with tool-joints on each length, which are successively added to the string of pipe until about 65 feet of hole has been made (the combined length of the total grayhound) after which it is possible to pull out all of the "grayhound" and add a complete fourble. One joint of the "grayhound" is styled a single, two a double and three a thribble.

In this way then, the depth of the hole is accurately known when each joint of the "grayhound" is down, or about every 21 feet. It is good practice to calibrate the Kelly at 5 foot intervals or even every foot, starting from the top, using a cold chisel for the purpose. The calibrations should be marked with Roman numerals so that it becomes possible at a glance to determine the depth of the hole at any point by deducting the amount "up" on the Kelly (the amount out of the hole) from the total pipe measurement as computed by the driller for each joint down, which it will be remembered also includes the Kelly.

Steel line measurements should be taken in addition at important points such as key horizon markers, possible casing seats and above the point an oil sand is expected. This is desirable, because in measuring pipe on the surface no account is taken of the stretch in pipe due to its own weight, and furthermore because wind and temperature introduce inaccuracies that are difficult to eliminate entirely. The same steel line should be used each time in taking measurements in the same well to eliminate errors due to differences in steel lines themselves. Lines should be discarded entirely when they have very evidently become stretched.

It is possible, therefore, by the use of steel line and steel tape, correctly and frequently used, to keep measurements correct and so determine **where** formations change. It is the purpose of this article to describe briefly how the driller recognizes a change in formation, and how he identifies each formation encountered. Also, to indicate briefly some aids in this recognition other than the core barrel, the use of which has been described elsewhere.

Method of Determining Formations

First and foremost be it understood that the driller with his hand on the brake and familiar with the action of his machinery and pump since the well was "spudded" in, is by far the best judge of the formation in which he is drilling, provided no examination of cuttings and cores is made, in which case, of course, the trained geologist is able to give a far better description of the formation than the driller. However, it is possible for a bystander, after a little experience, to gain a very fair idea of formations as they are being drilled through. And it is most desirable that geologists be able to do this. Since they are primarily interested in the logs of wells, they should be able to log a well, or at least check the driller on a well in which they are interested.

The action of the pumps, rotary and engine give the clue to the nature of the formation through which the drill is passing.

Notice the normal speed of the pump and the sound of the exhaust when the drill stem is off bottom. After being on the derrick floor for a short time any variation in the sound and speed of the pump is quickly detected. Any slowing of the speed, or laboring of the pump, shows a gumminess or stickiness in the formation. For example: Feeding the drill stem as rapidly as it will go while drilling in sand will not affect the speed of the pump. The same tactics in a tough gumbo will stop the pump entirely and the pressure may even climb so high as to burst connections and drilling hose. All grades of stickiness between these extremes can be noted. In the order of their ability to slow the pump when the drill stem is "crowded," the major formations are arranged as follows: tough gumbo,

B. S. SoRelle Goes With Pure in Texas

Mexia, Texas, April 5.—Announcement was made here today by R. W. McIlvain, vice president of the Pure Oil Company, of the appointment of B. S. SoRelle as general manager of the production department of the Southwestern districts, embracing the states of Texas, Louisiana, Arkansas and Oklahoma.

Prior to April 1, last, Mr. SoRelle was connected with the Simms Oil Company at Shreveport, Louisiana, as general superintendent of the Louisiana and Arkansas districts, which position he assumed in January, 1923, after resigning from the employ of the Louisiana Oil Refining Corporation, where he served as general superintendent of production.

For the present Mr. SoRelle's headquarters are to be located at Mexia, pending decision as to whether they will be moved to Dallas or Houston.

B. S. SORELLE

gumbo or clay, gummy shale, soft shale, sandy shale, hard shale, sand.

The pump is not always immediately affected by a slightly sticky formation, but as the cuttings "ball up" on the bit the pump slows and the rotary acts as if it were being subjected to a drag, —it takes more steam to keep it rotating at the same speed. To remove this "balled up" material the drill stem is "spudded," which is the operation of picking it up five or six feet, rotating it rapidly and then dropping it until almost on bottom, when it is checked and the weight of the string of pipe gradually allowed to rest upon the bit. This is done several times until the bit is free again. When the drill stem is lifted after being dropped into a sticky formation, it jumps just as the bit pulls out. This is known as "pick up." In a tough gumbo this jump or "pick up" is very great, often causing the pipe to jump one or two feet and shaking the derrick severely. In less sticky or gummy formation the "pick up" is less noticeable and sometimes can only be detected by feeling the pipe as it is lifted. In sand the pipe lifts without any perceptible "pick up."

In determining the grade of gumminess or clayiness of a formation some mechanical features must be remembered. A short bit will give added semblance of clayiness because it "balls up" more easily and because it is easier to plug the water courses in the bit through which the drilling mud circulates. Any other obstruction such as small pipe, or pipe that fits too snugly in the hole or casing and therefore retards the circulation of the drilling mud, will lower the speed of the pump, and must be considered in the determination of formation.

On the other hand a sudden increase in the speed of the pump does not always indicate a sand. If the pump "runs away" it probably is due to the fact that the mud in the slush pit has become lowered to such an extent that the pump suction has become exposed and the pump does not get a full cylinder of fluid at each stroke, causing it to race. Debris around the suction strainer will produce the same effect. A leak in the connections or a break in the drill pipe will increase the speed of the pump, since the head against which it must pump is reduced in that event.

All such matters are readily noticed and corrected and proper consideration of them is taken by the experienced driller. Once a driller definitely decides that he is in a sand, the practice is to slow down the pump since this saves steam and prevents forcing an excessive amount of fluid into the formation, which would deplete the mud supply.

Recognition of Formations

Enumerating in more detail the characteristics of formations as they are drilled, we have:

Clay or Gumbo

The pump labors. When drill stem is "crowded" it will stop pump. When "spudded," stops pump and has large "pick up." Bit balls up easily and rotary therefore drags. Tough gumbo drills slowly and must be spudded frequently.

Gummy or Sticky Shale

When drill stem is crowded pump labors, but will not shut down completely. Bit drags and balls up. When spudded has a pick up but does not quite stop the pump.

Soft Shale

When drill stem is crowded pump labors a little, but does not ball up badly. Spudding will slow the pump slightly and has a very marked pick up.

Limey Shale

Pump does not labor, but bit balls up when crowded. May or may not slow pump when spudded and has some pick up.

Sandy Shale

Pump does not labor even when bit is crowded, usually does not ball up (depends upon the amount of sand in the shale, if only a small amount the characteristics will more nearly approach those of shale). When spudded has a slight pick up. Usually drills very rapidly.

Sand

Pump will not labor no matter how much bit is crowded. When spudded never slows or stops pump, and has no pick up. (If bit is badly out of gauge a pick up may result, but it is easily detected by its dragging nature instead of the sharp pick up occasioned by a sticky formation.)

Hard Shale

Drills like hard sand and is sometimes mistaken for it. It may, however, slow the pump when bit is crowded very hard; and have a slight pick

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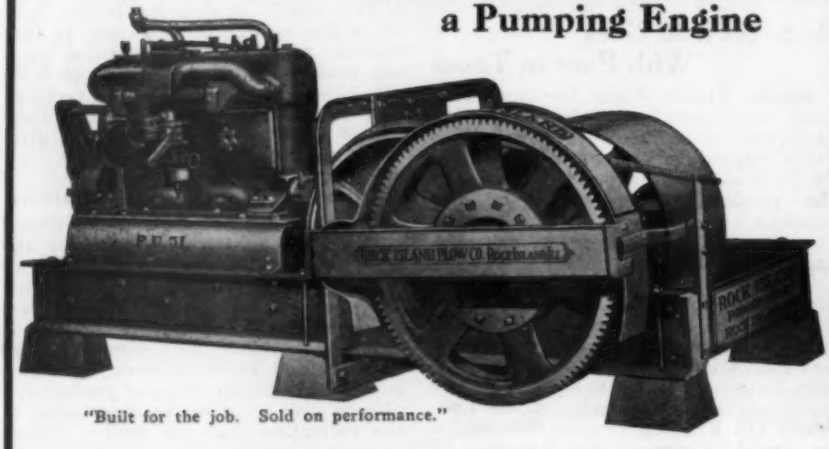

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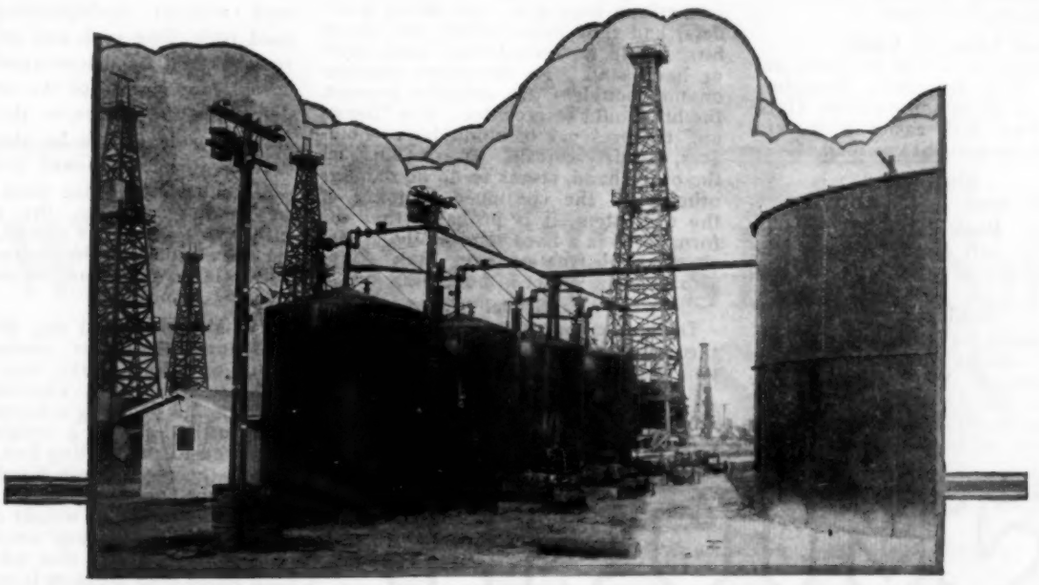

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HOUSTON, TEXAS

Say you saw it in The Oil Weekly

up, when spudded, in which case it is usually correctly identified.

Hard Lime or Chalk

Drills exactly as if the bit were out of gauge, and, therefore, dragging. "Balls up" on bit to some extent. Hard lime and chalk drill easier with very thin mud, than with heavy mud.

Shell

Drills like sand.

Rock Salt

Drills like soft sand, whitens the mud and leaves a salty crust on the ditch.

Boulders

When a **sharp** bit jumps and cuts unevenly, it is usually caused by boulders of hard material. With a dull bit the same effect can be obtained on any hard formation. This accounts for the large amount of boulders recorded in some rotary well logs. Many of the formations logged as containing boulders, had they been drilled with sharp bits, would be recorded as hard shale or hard sand. To determine whether or not boulders are actually present, the bit should be crowded. If it "hangs up," the presence of a boulder or boulders, is fairly certain. If crowding, on the other hand, seems to do no damage other than the continued jumping of the drill stem, it is probable that the formations is a hard sand or shale. Mechanical obstructions or junk might also give the effect of boulders.

Gravel

Drills like coarse sand. The mud returns are either greatly reduced in volume or may even be lost entirely.

Rock

As recorded by drillers, rock is any very hard formation other than tough gumbo. The practice of recording rock without distinguishing between sand rock, lime rock and gypsum caprock, should be discouraged. Even a casual examination of the cuttings will determine the nature of the rock, and further evidence can be obtained by a method to be mentioned below.

When steam is not used for power in running the rig, the pumps are either belt driven or geared, and some means of judging the character of the formations other than the sound of the exhaust is needed.

On the electrified rig, Watt-Meters, showing the power consumption of pump and draw-works, very accurately indicate the energy expended in both cutting and pumping a formation. With the further aid of a weight indicator attached to the drilling line, it is possible to keep a certain fixed weight of drill pipe on the bit while drilling. With this factor of weight constant, an increase in the power consumption of the pump indicates that which a laboring pump does when it is steam driven. The greater the power consumption (for equal conditions of depth, size of pipe, etc.) the greater the stickiness or gumminess of the formation being drilled.

An increased power consumption of the rotary indicates a drag, which on a steam driven rotary would be reflected by a slowing of the rotary table.

The action of spudding and the presence or absence of a "pick-up" would of course remain unchanged, no matter what the source of power was.

In the gasoline rigs now coming into favor the pump is belt connected to the prime mover, which operates the rotary as well. On this type of rig more attention must be paid to the action of the rotary than that of the pump, and this is facilitated by the fact that the rig is much quieter in operation than the steam driven outfit, and, therefore, it is possible to notice smaller differences in the action of the rotary, and small changes in the speed of the gasoline engine. Some idea of what the pump is doing can be gained on this type of rig by having a pressure gauge in the discharge line, at some point where it can readily be seen by the driller. It takes a little time on this type of rig to learn the characterization of the various formations as they are drilled through, but after a little experience they can be as accurately determined as on other types of rigs.

The other aids in identification, such as action while spudding, and aids to be mentioned below, are as applicable to the gasoline rig as to the steam driven rig.

Usually gasoline rigs are used primarily for exploratory work, in which case cores are frequently taken, and cuttings collected, so that identification is not left entirely to the judgment of the driller.

Other Aids in Identification

Appearance of Bit: Some assistance in determining or confirming the formation that has been drilled through is found in the appearance of the bit when it reaches the surface.

A bit that has become dull in sand

SMITH OIL AND GAS SEPARATOR

This letter is conclusive proof why the Smith Oil and Gas Separator meets with the approval of the oil producer.

CHAS. W. GRIMES
OIL PRODUCER
820 WRIGHT BLDG.
TULSA, OKLA.

Tulsa, Oklahoma,
February 21, 1924.

TO WHOM IT MAY CONCERN:

This certifies that I have charge of, as Production Superintendent, all the properties of P. A. Gillespie & Sons in the Osage Nation; that during the latter part of November 1923 we drilled in a Wilcox sand well on the NE¼ of Section 8, Twp 20 N, Range 12 E, Osage County, which well came in for a large producer, making about two million feet of gas and several hundred barrels of oil per day. The well soon developed water in large quantities and the oil and water did not separate after running into the storage tanks for a period of about three days. We erected a Smith Separator and the oil immediately as it came from the Smith Separator was perfectly separated and was pipe line oil. The well is still making several hundred barrels per day of oil and an equal or greater amount of water and it is pipe line oil as it comes from the Separator, and the pipe line company have never turned down a single tank from this well.

Before putting in the Smith Separator this oil was flowed into a gun barrel 16 feet high and it would not separate in the gun barrel. I regard the investment in this Smith Separator as the best investment on the lease because without the use of this separator the oil could not be run as pipe line oil without treating it.

Respectfully submitted,

W. P. Gillespie

In addition to conserving the gas for use at Casing Head Plant, it places pipe line oil in the stock tanks, reducing operating cost and increasing revenue.

SMITH SEPARATOR COMPANY
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What Some Drillers Have Said About SPIRAL STEMS

"I will never run anything else."—Jack Woods, Shell Company, California.

"I find it is impossible to get a crooked hole. Can make a full screw in a wet hole without making mud rings."—W. A. Delaney, Texas.

"Success would have been impossible with a straight stem."—W. W. Hargrove, Colorado.

"Crooked holes will be unknown when your stem is in general use."—Ellis Green, Texas.

SPIRAL STEM OFFERS 12 ADVANTAGES

1. **Prevents Crooked Holes.** Spiral wings have only three quarters inch clearance and keep the bit straight in the hole.

2. **Indicates Deviation.** Wings warn when hole starts crooked by showing wear at bottom end.

3. **Prevents Mud Rings.** Wings have shearing action which prevents mud rings from forming.

4. **Cleans Path for Bailer.** Wings keep hole open and free of obstructions.

5. **Reduces Whipping.** Wings keep rope socket in center of hole, and reduce whipping of walls with line.

6. **Mixes Mud.** Wings churn and mix mud making it possible to run a full screw.

7. **Guards Against Caving.** Wings keep socket and jars in center of hole and prevent them beating walls.

8. **Simplifies Fishing.** Wings hold string of tools in center of hole so that slip socket cannot miss going over.

9. **Protects Casing Shoe.** Wings keep tools in center of hole when drilling below cemented string of casing, and prevent shoulder of bit from striking casing shoe.

10. **Protects Casing From Line Cutting.** Wings hold line in center of hole.

11. **Prevents Key-Seating.** Wings give tools a rotary motion and prevent key-seating when underreaming.

12. **Strengthens Walls.** Wings give stem a rotary motion that tends to plaster walls with mud, smooth them up, and thus prevent caving.

Special Fishing Tool for use should spiral stem break across the wings

Distributed by all branches of the Continental Supply Company, the Republic Supply Co., of Los Angeles, Cal., and for export by the Continental Well Supply Co., Inc., 2 Rector St., New York, N. Y.

TITUSVILLE FORGE COMPANY
Titusville, Penna.

SPIRAL STEM

SPIRAL ROTARY DRILL COLLAR

Say you saw it in The Oil Weekly

Looks simple—and is!

CAN YOU THINK of any reason why a Sucker Rod Hook should be a complicated thing, least of all a SAFE Sucker Rod Hook? Look at this Stewart Hook! No trigger work, no latches or catches or handles. Just plain, strong, simple Sucker Rod Hook, with a safety device that lifts readily but cannot be PUSHED up by the load on the inside.

As a matter of fact, the harder the load tries to jump out, the tighter it's held—like sailor knots you've seen.

You ought to have one of these hooks. They are made by the Pelican Well Tool and Supply Company, at Shreveport, Louisiana, who make a lot of good oil country equipment. But the hooks are for sale at supply stores in the field.

If your store doesn't have them, write us for a descriptive folder and we'll tell you who does carry them in your territory.

The Safety Latch lifts up readily, but no amount of pressure from the elevator bails can PUSH it up.

For sale by dealers in your field. Write the distributors for folder.

WALTER O'BANNON CO.
Sole Distributors
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THE BOOK WITH A BIRD'S EYE VIEW OF THE OIL BUSINESS AS IT IS TODAY

OILDOM—Its Treasures And Tragedies.

Some of the Subjects: International Affairs (with map showing world resources—Origin, Surface Signs and Occurrence—Commercial Geology of the Seven Major Fields with table of comparison—Mechanism of the Industry, including Core Drilling—Economics of Exploration, Production, Transportation, Refining and Marketing—Conservation and Monopolies—Review of 1923—Gasoline, Its Sources, Marketing and Substitutes—The Automobile Industry—Conservation of Motor Fuel.
Features: Variety, Quantity and Up-to-Dateness of Illustrations and Information—Accuracy—Digestibility—Money-saving Suggestions—Simplicity of Statistics—Non-technical Descriptions.

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THE GULF PUBLISHING COMPANY
POST OFFICE BOX 1307 HOUSTON, TEXAS

is worn smooth, the striations on it being very fine, and the surface is bright. Very coarse striations on the bit usually indicate that the formation through which the bit has passed contained pyrite.

Lime in a formation draws the temper of the bit, and causes the edges to turn over. This is very characteristic and will result even if the bit was tempered so as to leave it exceptionally hard. It would seem that the heat due to depth and friction combined with the action of the lime are enough to cause an actual flow of metal as the bit rotates.

Boulders or junk in the hole will break jagged pieces out of the bit, not, however, to be confused with merely broken points caused by too hard tempering.

Salt wears the bit so that it comes out of the hole with a saw tooth edge.

Sampling Methods

Besides the methods of identification above noted, which are all in the nature of a diagnosis, based on deductions (entirely unconscious on the driller's part) the more direct method of sampling the formation drilled is used.

Three varieties of samples are obtained in usual practice. They are:

1. Bit samples.
2. Flow samples or cuttings.
3. Core samples.

Bit Samples

The bit sample is obtained sometimes by accident, and may be obtained frequently when desired.

When a good bit sample is desired, the pump is shut down completely and a foot or so of hole made. (If the hole has been caving or is in bad condition in any way, the pump should not be completely shut down.) The drill stem is then pulled in the ordinary way. If the formation is at all sticky, good samples are often obtained in this way, which compare favorably even with core samples, and save the round trip necessary in taking a core. Such a sample should be taken each time it is necessary to come out of the hole to change bits, and will confirm the identification of the last formation drilled. It is even possible at times to obtain samples of fairly sandy formations by this means. The gumbos and shales usually are found sticking to the bit either on its face or under the collar, even when no special effort has been made to obtain a sample.

Flow Samples

Flow samples, as the name implies, are collected from the drilling mud as it issues from the well.

After casing has been set, a tee is usually put on, and a flow line from it to the side of the derrick arranged to discharge the mud stream into the ditch. This makes it convenient to collect samples in a bucket or a bull plug. If no casing has been set, samples are caught in a bucket placed under the rotary in such a way as to catch part of the mud as it splashes out of the hole. A better method of catching the flow samples, but one seldom used, is to build a flow box in the mud ditch itself, arranging baffles in it in such a way that the velocity of the stream is checked and the cuttings so allowed to drop out.

These flow samples when washed

(Continued on page 34)

Handling Land and Lease Departments

Method used by one company proves very successful—details of organization

By J. Edgar Pew
President of the Twin States Oil Company

DURING the recent meeting of the American Institute of Mining Engineers at Tulsa, J. Edgar Pew, President of the Twin States Oil Company, delivered an address on the organization of land and leasing departments. Mr. Pew stressed his idea that every land department head should be familiar with the geological structures on which his prospective purchase is to be made, making plain the fact that the lease broker can picture such vivid geological structures that it is sometimes hard for the head of the land department to resist the purchase of the tract for sale. His speech in part follows:

Must Obtain Leases

"The subject is 'Land and Leasing' and the organization to handle the same, and how the geologists and engineers can best co-operate with this department in the oil business. As most of the oil production comes from leased lands and not fee property, I shall refer to 'Leases' as covering the producing tracts.

"To produce oil, leases on land must first be obtained. Well selected leases are all important. Not many years ago the location for drilling for oil in wildcat territory was too frequently determined by the nearness of adequate water and fuel supply, or with a view to cheapness of transportation. To some extent the 'creekology' theory is the result of the greater number of wildcat tests having been made near streams, to obtain water for operations and everything else being equal, as was frequently the case, development of oil was had first in many cases along the creeks.

Geology Pays

"With the greater development of the science of geology, as applied to oil, an up-to-date operator will depend on his geologists for his location, and in many cases, will spend thousands of dollars to get water to it. The wisdom of following the geologist rather than the creek has been abundantly demonstrated by the developments of the past few years. In vast territories where dry holes are spotted around at intervals of a few miles or less apart, and by reason of which these territories have been condemned for oil, the geologist is now finding many more spots that are producing large quantities of oil. No better tribute to the work of the geologist can be found than the surface and subsurface work being done in practically all parts of Oklahoma and the development had as a result of this work.

"A land department is usually organized in these days by placing in charge a man who is not only acquainted with the oil development, but who is a shrewd buyer, a first requisite for which should be unquestioned integrity.

"It takes a shrewd buyer to resist the persuasive lease broker, frequently backed up by a geological picture from which the oil fairly drips.

"The geologist can help a lot by being absolutely honest when he makes these pictures, and will also thus strengthen their own cause. A geologist should interpret his own work and put his name behind his interpretations. If he doesn't he is liable to be misquoted and often discredited as a result, by some overzealous lease broker, giving an interpretation never intended by the geologist.

Ideal Land Department

An ideal land department organization is one in charge of the head of the geological department when for this position a man is found who is not only a good, sound geologist, and a good trader and judge of lease values, but one who has had considerable experience in the operating department. Such a man, able in all three of these departments, will go farther in our future large organizations than any other.

"One of the difficulties an oil executive has is the harmonizing of his different departments, particularly the geological department with the operating department. Frequently the latter department is headed by a man of splendid production and drilling experience and ability but who is not tolerant of the theories of the geological department. Tact and patience should be developed and practiced by the geologist to overcome this prejudice.

"If the leasing department is not headed by a geologist, as in many cases it is not advisable, then the geological department should be very closely in touch with, and probably under the supervision of the leasing department head. The two must work in such close harmony as to make one general head advisable.

"All assignments to the geological department should come from or through this head, and all reports should be made to him. The handling and filing of these reports should not require any comments from me to this body.

"The lease department, the taking of the lease, the method of handling it through the various stages of title examination, the title opinion, the payment of the bonus, the waiving of defects of title, if any, and responsibility therefor, the follow-up system thereafter, the payment of rentals and the looking after of the requirements of the lease, these are all more or less a matter of detail but all important, and if any great quantity of leases are taken, should be thoroughly organized for handling, else some omission may entail the loss of a most valuable piece of property.

Different Systems

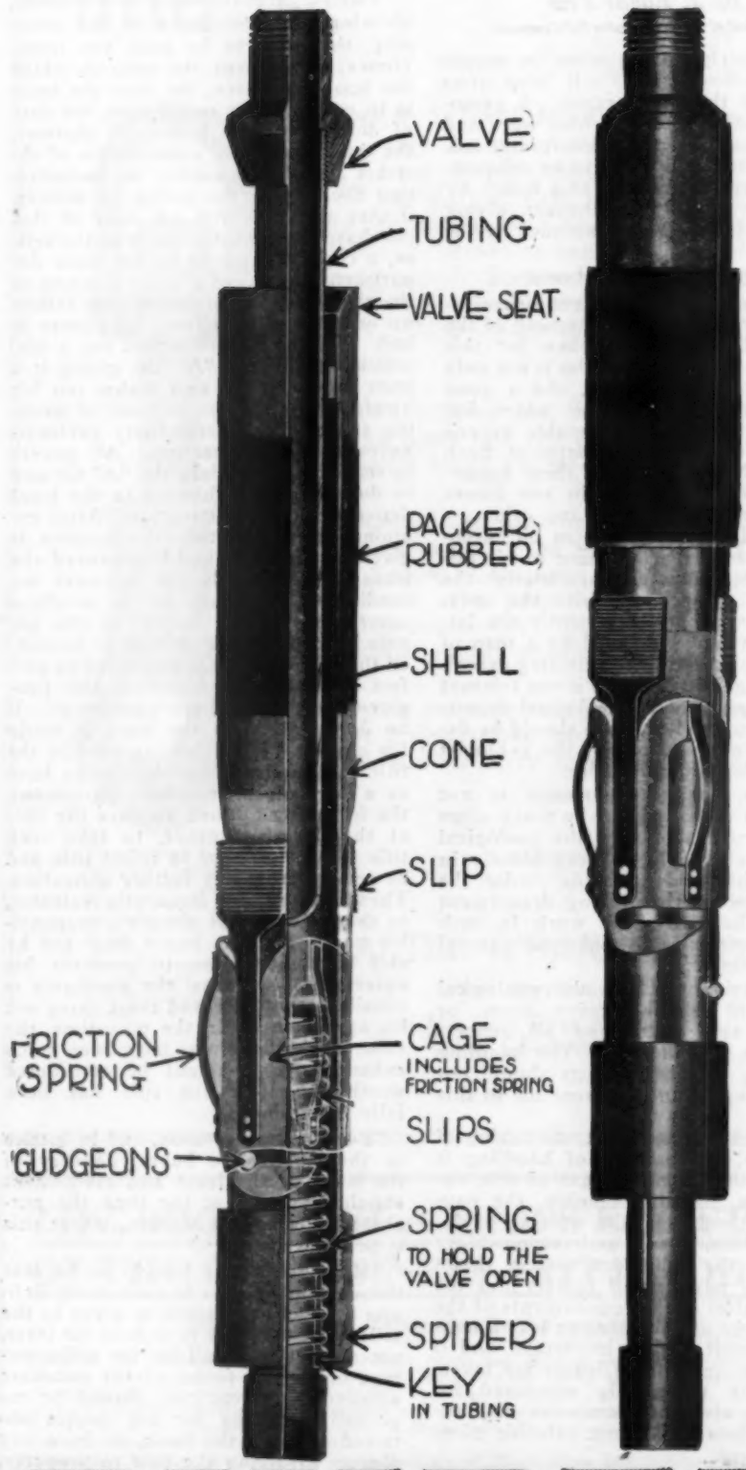
"This work is handled by different companies in different ways as to detail, but in the main probably is handled in much the same way. Briefly, our lease department is managed as follows:

"First, a purchase agreement is made, showing the description of the property, the price to be paid, the terms (times) of payment, the form on which the lease is written, the time the lease is to run, the first rental date, the date of delivery of the lease and abstract, the time allowed for examination of abstract and the time after the examination thereof for the curing of defects, if they can be cured. A copy of this purchase agreement is given to the seller, a copy is retained by the lease department buyer and a copy is given to the title clerk, who should also follow up and see that delivery of papers is had. This title clerk makes out a file, which we call our "A" file, giving it a lease number. He also makes out his 'tickler' card for the purpose of keeping track of the preliminary performances of the transaction. All papers as received are put into the "A" file and in due course are handed to the legal department for examination. After examination of the title the opinion is given in triplicate, and if approved the lease is then ready for payment according to the terms of the purchase agreement. If any defects in title are noted a copy of the opinion is furnished the seller and he is requested to perfect the same, and within the time given by the purchase agreement. If he does this, then the lease is ready for closing. If he fails to perfect the title the purchaser should always have as a part of the purchase agreement, the following option: To cure the title at the seller's expense, to take such title as is shown, or to reject title and be relased from any further obligation. These options are frequently valuable, as the seller is not always a responsible party, and the buyer may not be able to compel him to perform his agreements; whereas, the purchaser is usually responsible and must carry out his agreements. In the meantime, the value of the lease may have been much enhanced, or it might be considered worthless before the title has been fully determined.

"For the same reason, and in justice to the responsible buyer, delivery of the lease or the lease and assignment should be made at the time the purchase agreement is written, where this is possible.

"Many leases are bought to be sent through the banks. In such cases, definite instructions should be given to the seller that the bank is to hold the lease, not subject to recall by the seller except under the terms of the purchase agreement. Great care should be exercised in caring for any papers obtained through the bank, or from any source, involving the title to property, as the purchaser is held responsible. Again, when leases are delivered through the bank, care must be taken to RETURN THROUGH the bank either the papers or the payment, and not entrust either of these to a broker, or anyone other than to the bank. The

GUIBERSON TAKES ON T



OPERATION OF THE CONTROL HEAD PACKER is as follows: Packer retains position shown at left while running in, the powerful spring holding the packer in its lowest position with respect to tubing and holding the valve at top wide open. This permits free passage of fluid and gas between shell and tubing.

Twelve to 18 inches above point where it is desired to set, the tubing is given a half turn to the left, disengaging the hooks on cage from the gudgeons. The friction springs then hold the cage stationary, and the packer is lowered until slips engage the walls of the casing, when the weight of the tubing will at once compress the spring, close the top valve, and set the packer.

To reset lower, tubing is raised several feet and given a half turn to right to re-engage the hooks on cage, after which the setting operation is repeated at any lower point desired.

To reset higher it is not even necessary to re-engage hooks on cage.

After packer is set the passage between packer and tubing can be reopened at any time by simply lifting the tubing a few inches, and closed again by lowering it.

Packer is removed from the well by simply pulling the tubing. The valve opens wide the moment pulling begins and remains open, thereby preventing any swabbing effect.

GUIBERSON

BETTER BE SAFE GUIBERSON THAN SORRY

TWO NEW PRODUCTS!

Crowell CONTROL HEAD PACKER
Crowell TUBING OIL SAVER

will now be known as "GUIBERSON" products

The Guiberson Corporation, which for several years has been sole manufacturer and distributor of the GUIBERSON Bottom Water Plug and Spiral Tubing and Casing Packers, has now taken over from the Crowell Packer Company the exclusive manufacture and distribution of two other patented inventions of Mr. E. V. Crowell, namely the CROWELL CONTROL HEAD PACKER and the CROWELL TUBING OIL SAVER. These specialties will henceforth be known as "GUIBERSON" products.

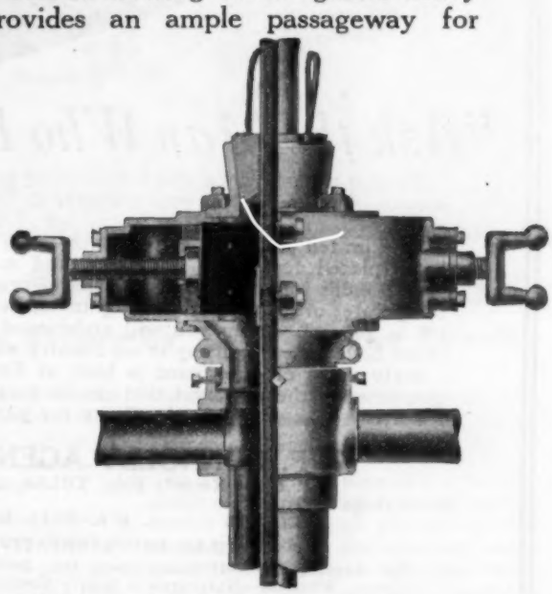
We are greatly pleased to announce, also, that Messrs. E. V. Crowell and Al B. Crowell, together with their entire field force, will now be associated with the Guiberson Corporation. These men will continue to render, in conjunction with the older members of the Guiberson field organization, the same type of personal field service that they have rendered in the past.

The CROWELL CONTROL HEAD PACKER has been on the market for two years and is now in wide use throughout the oil fields of the United States. This packer, while answering all the purposes of an ordinary packer, was especially designed to fill the urgent need for a packer which could be run in flowing wells against heavy pressures. While running in the hole it provides an ample passageway for oil and gas, between the packer and the tubing. Not until the packer is set does the top valve close. The valve can be opened at any time and a passage re-established between packer and tubing, by simply raising the tubing a few inches. Packer is easily reset lower or higher, and when withdrawing from the well the valve opens wide, preventing any swabbing effect. It is being successfully run in wells flowing up to 2500 barrels of oil.

The CROWELL TUBING OIL SAVER attaches to the casingheads of flowing wells and prevents loss of oil while running or pulling the tubing.

Both products have been highly perfected by Messrs E. V. and Al B. Crowell and no changes in design or materials are contemplated.

We have new fully descriptive folder on these products which will be gladly mailed on request.



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California Branch: 1737 E. 7th St., Los Angeles

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825 Mason Bldg., HOUSTON

506 Trust Bldg., NEWARK, O.

GUIBERSON

BETTER BE SAFE GUIBERSON THAN SORRY

purchaser is responsible to the bank.

"It should not be necessary to emphasize this point, but I have known a case where failure to realize this duty created much embarrassment and some loss.

"One further comment in reference to the passing of title is not entirely acceptable and cannot be cured at the time the lease is offered. The question then arises as to whether the lease is so desirable that it is advisable to accept such title as is offered. This is a question that must be decided by the executive in charge of the land department or, if the amount involved is such that he does not care to accept this responsibility, by the executive in charge of the business. In either case, however, the file should show all of the objectional features in connection with the lease, and these should be removed before drilling is started, if it is possible.

"Assuming the lease has passed title, or has at least been accepted, the title clerk has possession of all papers together with the attorney's approval of title. Either verified or photostatic copies of the lease, the assignment and of any other unrecorded instruments are made by him, after which all unrecorded instruments are sent by registered mail to the county clerk for record.

"If, for any reason, in case of purchase of an assignment, we are unable to obtain the original lease instrument, we require a certified copy of the same for our file.

"The file clerk furnishes the data to the engineering department for the placing of the lease on our maps.

Lease Form.

"The 'A' file, or folder, becomes the permanent repository for all papers (except the lease itself and the assignment), but copies of same, also for the abstract attorney's opinions, a copy of the purchase agreement, and for any other papers in connection with the lease. The original lease or assignment, or both, go to the lease file, and receives the same number as the "A" file has, which contains the papers.

"A lease card is made with the same number as the lease. When the lease has been duly accepted, the lease card containing all the conditions of the lease briefly stated, giving the lease number, county and state, description, form, date, record reference, map reference, and all peculiar conditions in connection with the lease, briefly stated, should be made. Form No. 2 hereto attached is the form we use.

"Further, briefly stated, form No. 2 is a rental tickler. This is carried in loose-leaf form with provisions made for five years' rentals. This form is used as a check back against the rental payments. It carries all the provisions of the rental obligation for the various months, and is carried by numerically listing the leases thereon.

"Form No. 4 is the rental sheet.

"Form No. 5 is the rental sheet used on leases where there is an undivided interest with some other parties in the lease.

"Form No. 6 is the rental sheet used for the lease with a divided interest, but where the rental is paid by ourselves.

"Too much care cannot be exercised in looking after rental obligations. These rental sheets contain a complete take-off of the lease with its various obligations and conditions, all of which challenge the attention of the lease department monthly when the rental lists are made up.

"Form No. 7 is an expiration record, and all of the records of expirations for different months are carried on these sheets. In other words, the expirations in January and February are carried on a separate sheet for that month, with

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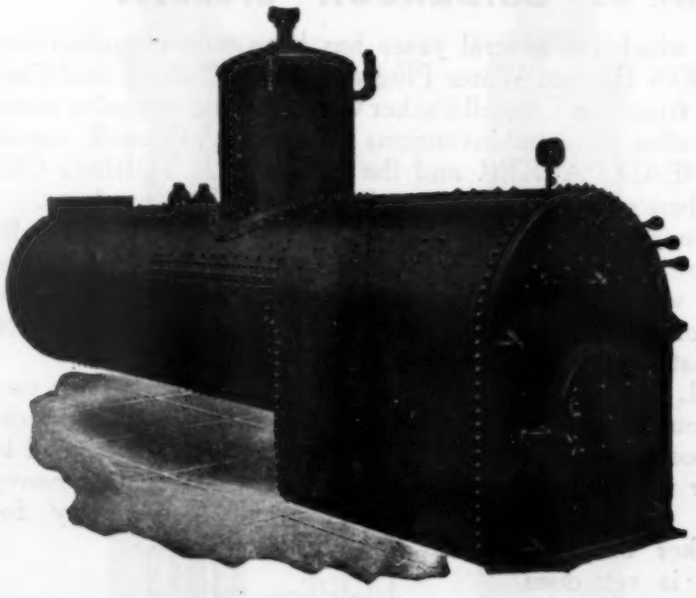
STEAM BOILERS



"Ask the Man Who Runs One"

All that we ask, when you are deciding on boilers, is that you inquire of the man who runs a Farrar & Trefts what he thinks about it.

Let him tell you of its convenience—with handholes and manholes placed for quick inspection and easy cleaning; of its safety—built to conform to the laws of the state in which it is to operate; of its strength, its tightness, its roominess, its service in general. Then you will understand the reputation that these boilers have built up in oil country work.

Sixty years of experience is back of Farrar & Trefts—your guarantee of the very best that can be made. There is a model for every oil country need. Write for particulars.

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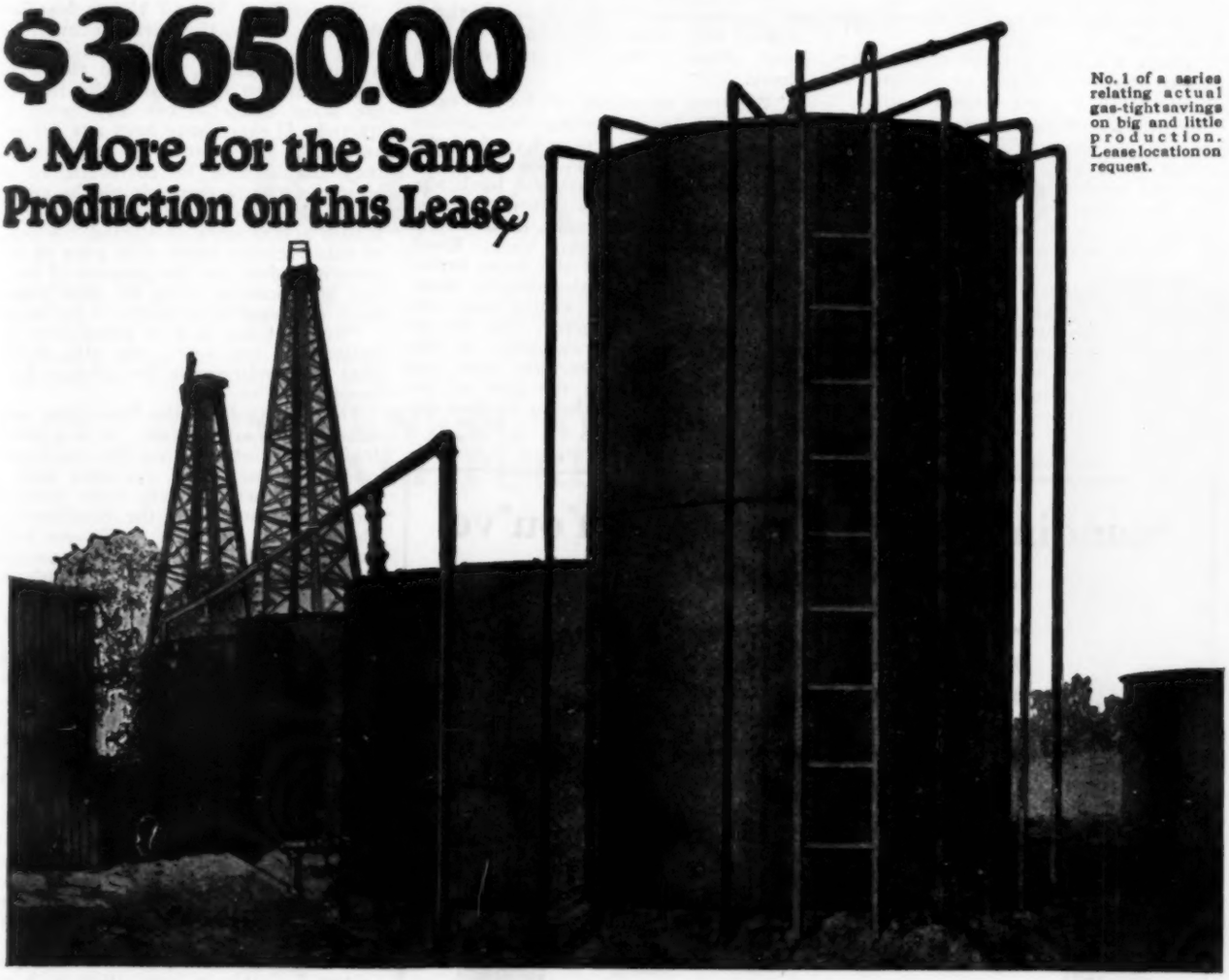
~More for the Same Production on this Lease



No. 1 of a series relating actual gas-tight savings on big and little production. Lease location on request.

Columbian Pressure Flow Tank
—Boosts the Sale Price—By Boosting the Gravity

THIRTEEN wells are "tied-in" on the 200-Bbl. Columbian Pressure Flow Tank shown here. They are making 40 Bbls. of oil and 100 Bbls of water. A unique syphon handles the water.

The oil is bringing 25c more per barrel than it did before this Columbian Pressure Flow Tank boosted its gravity.

25c more per barrel on 40 barrel production totals $3,650.00 a year. That's many times more than the gas-tight installation cost. The saving is well worth while on the smallest production. On big production it is tremendous.

In every oil field there is a Columbian dealer-erector rendering overnight erection service backed up by overnight factory shipping schedules and adequate stocks at all strategic points. More than 40,000 Columbian Bolted Steel Tanks, ranging in capacity from 65 to 10,000 Bbls., have entered the oil fields of the world.

Trade COLUMBIAN TANKS FOR THE WORLD Mark

- Truck Tanks
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- Bulk Station Tanks
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The Columbian Dealer-Erector in your field will help you with your evaporation problem. Ask him about Columbian gas-tight construction.

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COLUMBIAN STEEL TANK COMPANY

EST'D 1894 TANKS FOR THE WORLD

1405-1625 WEST 12TH STREET KANSAS CITY, MISSOURI

Say you saw it in The Oil Weekly

a separate sheet for each of the months following.

"Form No. 8 is a sheet calling particular attention to special obligations of the lease and its requirements.

"Form No. 9 represents the enclosures we use, comprising the check form, notice to banks, etc., in connection with the sending out of our lease rentals. In doing this, rentals are usually payable at some bank, so we make out the deposit slip in triplicate. We also have a printed notice to the bank which accompanies these deposit slips and checks, and we also send an envelope directed to the owner of the lease, suggesting to the bank that they send one of these deposit slips to the landowner. We find that this avoids considerable correspondence and mistakes. We also send an envelope with a return address to the company on it, and one of these deposit slips is returned to us by the bank showing that they received the check.

"We send all rental checks by registered mail. In registering these checks we always request a return card of the postal department from the receiving postoffice to show that the bank has received the letter and the enclosures. This return card is then filed in the folder for the particular lease. Until this card is returned the lease rental clerk is always on notice that for some reason or other the rental may not have been paid, and before it is due he has opportunity of checking up his records to see if there has been any lack of attention on the part of his company that might bring us into default.

"Forms Nos. 10 and 11 are location sheets. When the first location is made on a lease No. 10 form is used. A copy of this is given to the legal department to check over the title to the lease again before any work is started. If there have been any defects passed in the previous examination they should now be corrected, or at least the management should be advised of the exact condition of the title before actual work is started. A copy of this location sheet also goes to the superintendent for the purpose of making his location when he gets notice from the legal department to go ahead.

"No. 11 takes care of subsequent locations on the lease, and also shows that the conditions in No. 10 have been complied with.

"Form No. 12 is the farm plat, covering an operating lease. It is a loose-leaf blue print showing the conditions on the lease being operated and is brought down to date from time to time. It also shows the condition on the adjacent property. It is very helpful for distribution amoung the various departments that have to do with the operations from any viewpoint.

"Much of this system is detail which might or might not appeal to different operators, and much of it would not be necessary for the individual or for the smaller operating companies, as either the individual or heads of companies doing a limited amount of operating, are enabled to keep more intimately in touch with all conditions of the limited properties.

"The system as outlined, however, or some similar system, is very necessary for the operation of a comany dealing with large numbers of leases. Mistakes are to be avoided as valuable leases are frequently lost by negligence or oversight.

"Further, a complete record is always desirable in connection with any property, particularly so where the operations are of considerable moment and are of varied character. Without a thorough system to cover the operations and the records of the same, it is impossible to satisfactorily keep track of the business.

Standing Valve Efficiency You've Never Had Before

See for yourself the five practical advantages of the Roark over common-type standing valves

The Old Style

The Roark

The illustrations shown at the left and right explain better than words why operators who once try the Roark Standing Valve never fail to adopt it as standard. Note particularly the following points:

Point 1—The greater part of the ordinary standing valve is inside the working barrel—cutting down the length of the possible pump stroke.

The ROARK Standing Valve is entire outside the barrel, making possible a bigger stroke—greater capacity.

Point 2—In the ordinary type, the traveling and standing valves are the same size—contrary to the scientific principle which says that forcing a high volatile fluid through small passages subjects it to vacuum, reduces gravity and tends to create cut oil and B. S.

The ROARK valve is outside the working barrel, uses a ball larger that that of the traveling valve, reduces the speed at which crude enters the barrel and tends to prevent cut oil and B. S.

Point 3—The flimsy cage of the ordinary standing valve offers practically no protection to the ball and seat.

Even if a string of rods were dropped into a well on top of a ROARK, this heavy perforated plate would protect the ball and seat from injury.

Point 4—Leather rings give constant trouble—becoming loose, leaky and unsatisfactory in general.

The design of the ROARK needs no rings!

Point 5—The seat frame of the ROARK may be easily and inexpensively renewed. An old body plus a new seat frame, ball and seat equals a New Standing Valve.

Ask for further particulars

Hoffer Oil Corporation Organized in Ft. Worth

Fort Worth, Texas, April 11.—A new company to be known as the Hoffer Oil Corporation was organized here recently. The corporation is capitalized at $2,500,000 with 100,000 shares of $25 par value.

The organization will take over properties in various fields now held in the name of T. B. Hoffer et al, including the recent 5000 barrel well in the Cromwell pool in Seminole County, Oklahoma.

Offices of the company will be in Fort Worth, and operations will be carried on in Texas and Oklahoma. Present properties, in addition to the Seminole County property, include acreage in Archer, Bastrop and several counties in South Texas.

Officers of the corporation are: T. B. Hoffer, president and general manager; M. N. Wheeler, Casper, Wyoming, vice president; F. M. Moss, vice president and treasurer; H. L. Laue, secretary. Directors are: T. B. Hoffer, B. S. Walker, E. M. North, W. K. Stripling, M. N. Wheeler, J. F. O'Donohoe and T. E. Cranfill.

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ELECTRA, TEXAS, U. S. A.

Say you saw it in The Oil Weekly

Methods of Logging Rotary Drilled Wells

(Continued from page 26)

clear of the drilling mud yield a good check on the formation being drilled, or rather of the formation that had been drilled when the mud sampled was on bottom. Various systems of collecting flow samples are used. One method is to take samples at specified intervals—usually every ten feet. For sub-surface work this is very satisfactory.

For the identification of formations on the derrick floor it is more advantageous to sample only changes in formation. This is done by two methods. By the first method, drilling continues uninterrupted and a sample is caught at an interval of time after the change is suspected, long enough to insure getting the cuttings from below that change. The time interval to accomplish that purpose varies with the depth of hole, size of casing and drill stem, and speed of the pump.

The second method is one that is recommended where accurate results are desired. After a change of formation has been noted, or is suspected, drilling is stopped but the pumps kept running at full speed until all the cuttings have been washed out of the hole. The bull plug or flow box used to collect the cuttings is then carefully sluiced out so that all old cuttings are washed away. Drilling is then resumed. The first cuttings that then appear are the true samples of the formation. This method is very seldom used because it has one great disadvantage. The time required to pump all the old cuttings out of the hole may be considerable, forty-five to sixty minutes often in deep holes. During this time no drilling is done—an item of importance when speedy work is desired. But this method will often determine for a driller whether he is in hard shale or hard sand, which knowledge will save two round trips in coring—a far greater time consumer. It has the great advantage of delivering cuttings almost entirely free from cavings and gives a sample that may definitely be stated to come from a certain depth—the depth at which drilling was resumed after the interval of pumping.

Cores should be taken in all sands and sandy shales when wildcatting, and often it is not amiss to take more than one core in a formation even if the first core shows no oil. It is the usual practice to take a core in a wildcat well whenever the sand or suspected sand has been penetrated far enough to be certain an actual change has occurred. This may be from six inches to three feet into formation. Even if the formation is an oil sand, it would be possible for the first core to show little or no oil, since it would have been taken in the portion of the sand where gas had most probably displaced the oil. For this reason, it is desirable to take a second core if the formation has sufficient thickness to warrant it.

When a formation is cored and found to contain oil, it should then be cored either with a double core barrel, which allows a long continuous core to be taken, or should be cored at intervals of from three to five feet, with the ordinary toothed barrel.

By this method more intelligent screen setting can be made and drilling halted before salt water horizons have been drilled into too deeply.

It might be observed in passing, that the core of an oil sand is a far more accurate sample than the cuttings of an oil sand bailed from a well drilled by standard tools.

Since it is cheaper to drill wells by the rotary method, that system is the most desirable wherever it can be used. By its use many feet of casing can be saved, and drilling time shortened. The only objection to its use, that of poor resulting records and the possibility of "passing up" an oil sand and mudding it off, is not valid, for as noted above an accurate record can be kept, and by intelligent use of sampling and coring methods the possibility of missing an oil sand is practically nil. The added cost of careful coring still does not bring the cost of rotary drilled wells up to that of cable tool wells, because of the great saving in casing.

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Our Deepwell Pulling Machine sells for $475.00 F. O. B. Independence, and will handle from one to twenty wells, depending on the condition of wells.

There are various makes of tractors, of various prices running from $600.00 to $1800.00 each. Any of them are good, but some better than others. Any of these will operate our machine.

For instance, our machine and the Fordson Tractor will cost $1,555.00. Don't you think this is a fair price for the service of so many wells?

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Mast 8x10x36 ft., Douglass Fir A-Style, Two Wheel Truck, two 16" Bronze bearing crown pulleys, 2½ Steel Pin mounted in malleable boxings. Large supporting plate 16" dia. between crown pulleys, eliminating any chance of bending pin.

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Humphreys to Drill Test In South Texas District

Laredo, Texas, April 7.—Col. A. E. Humphreys of Mexia fame and associates have erected a derrick to start drilling on a wildcat test along the Reynosa Escarpment in the Webb County section of Southwest Texas. Leases on a large block of acreage were obtained after making a geological study of the territory, and the location is on the Petty land in the Dos Hermanas pasture and south of the town of Catarina. It is also described as being on the dividing line between sections 13 and 18, or at the point occupied by the United States army signal flag.

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Dia. of shank.	inches	2⅛
Length	inches	32
Weight	pounds	125

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Petroleum Geology, Past and Present

Science has played important part in development of oil production business

(Continued from last week)

By Ralph Arnold

Systematic exploration has proved beyond any question that it can be carried out successfully only by operators with large capital and much perseverance. This has been recognized in at least one instance by several large corporations organizing a common exploration company. Between the pioneering of the oil companies for new business and new oil fields, the American flag has been introduced into more places in the world outside of the United States by the oil industry than by any other single agency.

The Conservation Movement and the Leasing System

The suggestion to conserve our natural resources, initiated by Gifford Pinchot in connection with our forests, and espoused by President Roosevelt, was antedated many years by C. A. Ashburner[31] in "The Production and Exhaustion of the Oil Regions of Pennsylvania and New York." The Roosevelt policy, however, was carried actively into the realm of petroleum and gas in 1906 by I. C. White, C. W. Hayes, David T. Day, and others. White called attention to the waste of our fuel resources, including oil and gas, before the conference of governors at the White House, May 13-15, 1908. Day, as mentioned alsewhere, prepared an inventory of our national oil reserves at the same time.

In 1907, A. C. Veatch went to Australia to study the government land leasing laws of that country. From the time of his return in 1908 to the passing of the oil leasing act of February 25, 1920, there was a continual fight on between the proponents and opponents of the leasing system. The writer wishes to state here that if the radical anti-leasing group had listened to the suggestions of their conservative friends in and out of the government service, the leasing bill, with far more liberal terms to the operator than those that now prevail, would have been placed on the statute books. For instance, the maximum royalty probably would have been five per cent instead of "all the traffic will bear," as at present.

The writer had the questionable honor of suggesting the first withdrawal of public land from entry in 1907. The suggestion was promptly put into effect by President Roosevelt. This measure withdrew land classified as "mineral" from homestead entry, and was designed to protect bona fide wildcat drillers from fake homestead entrymen. The conservation movement had assumed such influence in 1909 that President Taft on September 27 of that year withdrew large areas of mineral land from entry, pending passage of the leasing bill; and on July 3, 1920, he made further withdrawals under sanction of congress, which tied up much of the oil land of the West for 10 years. The classification of the withdrawn lands was made by the geologists of the Land Classification Board of the United States Geological Survey, originally organized by A. C. Veatch, and for many years headed by W. C. Mendenhall. Max Ball, A. R. Schultz, C. A. Fisher and several other Rocky Mountain geologists were likewise engaged in this work.

The petroleum geologist has always stood for conservation as defined by C. W. Hayes, "Utilization with a maximum of efficiency and a minimum of waste." At the suggestion of J. A. Holmes, one of the early technical papers written for the United States Bureau of Mines was that on "Wastes in the Production and Utilization of Natural Gas, and Means for Their Prevention,"[32] by F. G. Clapp and the writer.

Petroleum Geology and Federal Income Taxation

Probably one of the most important contributions to the oil and gas industry in the last two decades was that made during the war by the ninety odd petroleum geologists and engineers associated with the writer, then chief of the Oil and Gas Division, Bureau of Internal Revenue, who, at great personal sacrifice, gave up their personal work and came to the assistance of the government bureau. Theirs was the problem of devising methods of computing depletion allowances, so that the taxpayers of this industry of wasting assets might deduct that portion of their gross profits from production which represented a return of capital, so that only their real profits might be taxed. Without going into details, it may be said that after breaking down many of the antiquated precedents of the Treasury Department, and overcoming equally obstructive prejudices on the part of many members of the industry, a method of making proper deductions, based on the estimation of oil reserves, was finally adopted and put into effect. The details of this method were incorporated in the Manual for the Oil and Gas Industry, prepared by these men and published by the Treasury Department in 1918. Since that time many petroleum geologists have found employment in assisting the operators in solving their tax problems. In this instance the industry was saved from the almost certain ruin which faced it under a rigid enforcement of the drastic income and excess profits tax law of 1917 by the application of scientific methods to this very complex problem.

Petroleum Geology and the World War

It has been said that the allies "floated to victory on a sea of oil," meaning that the abundance of petroleum for their ships, automobile transports, and aeroplanes enabled them to outmaneuver the enemy. The part that the petroleum geologist played in speeding up the production when it was needed is familiar to all who were intensively engaged as consulting or company geologists during those trying times. We were prepared to meet the call and indicate the places where the oil was to be obtained and co-operate with the producers in getting it out speedily. The names of M. L. Requa, W. A. Williams, Chester Naramore, and others, of our associates, as well as those of A. O'Donnell and S. A. Guiberson, Jr., will go down in history as those who helped "deliver the goods."

When H. P. Cady and D. F. McFarland[33] recorded the discovery of helium gas in certain wells in Kansas in their paper on "Chemical Composition of Gas," the statement aroused only academic interest, but when, during the war, the demand for this gas for inflammable balloons and airships became acute, it was the information first obtained by these men that enabled the United States Bureau of Mines, under the directorship of Van H. Manning and J. O. Lewis, chief petroleum technologist, to establish plants for its commercial recovery in the Mid-Continent field.

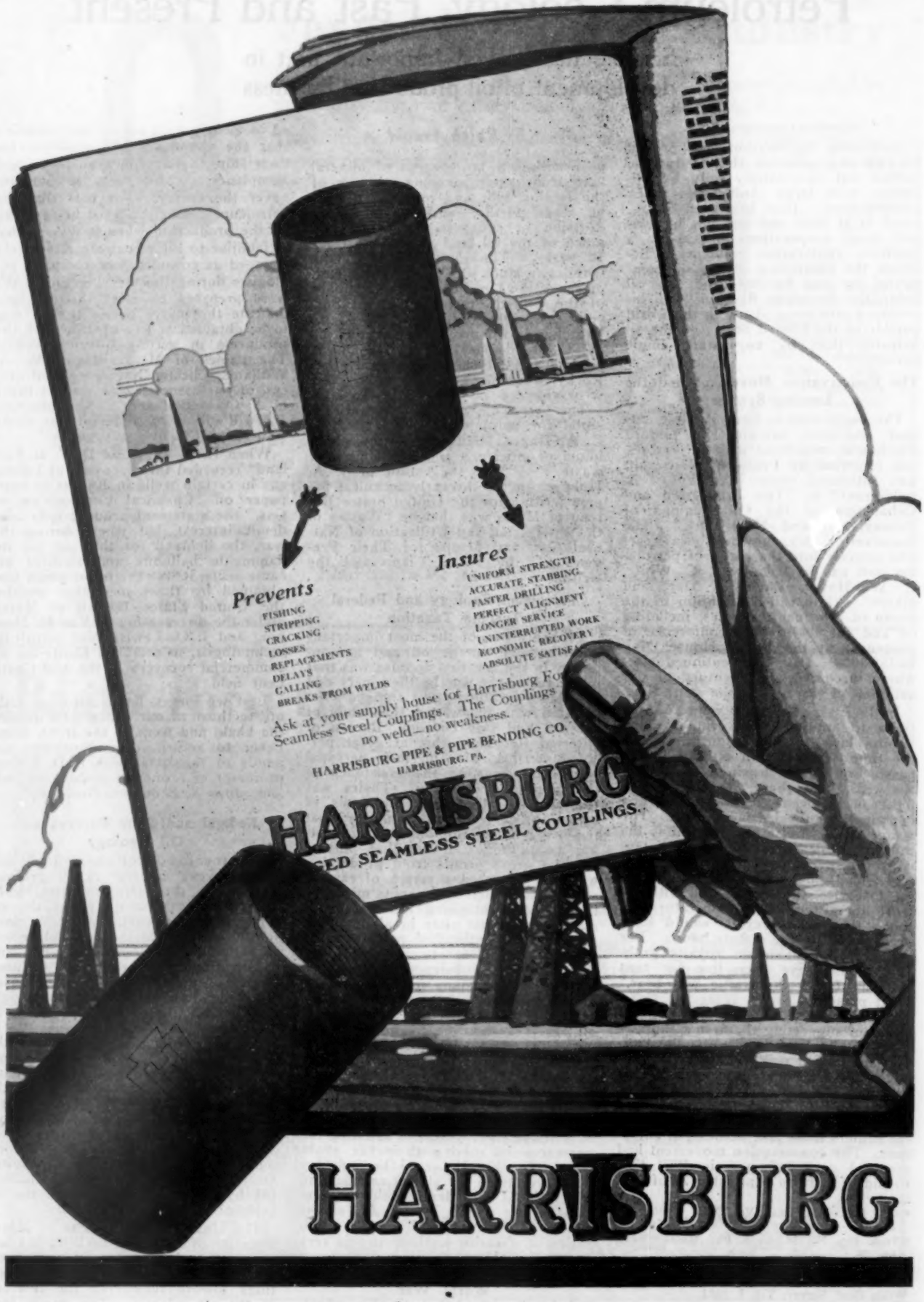
Lest we forget, let us also pay tribute to those of our group who donned the khaki and went to the front, many never to return. An illustrious example of the latter was J. D. Irving, professor of economic geology at Yale and editor of Economic Geology.

Federal and State Surveys and Oil Geology

The foundation of the federal and state surveys' interest in oil geology was laid in the early seventies, when J. S. Newberry wrote about the oil fields of Pennsylvania, West Virginia, and Eastern Ohio in the publications of the Ohio Geological Survey[34] and was continued on through the eighties, when Edward Orton in publication of the same Survey discussed the origin and accumulation of oil and gas.[35] In the middle and late nineties, W. L. Watts wrote the first reports on the California oil fields for the California State Mining Bureau. Practically all of the field work and issuance of the resultant publications on petroleum geology of our federal and state surveys, as we know them now, have taken place in the last two decades. The first separate oil report issued by the United States Geological Survey was Bulletin 184 by George I. Adams, on the oil fields of Texas, issued in 1901.

The United States Bureau of Mines, since its organization in 1910, has lent every effort in the way of experiment stations, investigations and publications toward furthering the interests of the oil industry. The writer feels

[31] Am. Inst. Min. Eng., Vol. XIV (1886), pp. 419-27.
[32] Tech. Pop. No. 38. U. S. Bur. Mines (1913), pp. 29.
[33] Kan. Geol. Survey, Vol. IX (1908), pp. 228-302.
[34] Ohio Geol. Survey, Vol. I, 1873.
[35] Ibid., Vol. VI, 1888.



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"They say these couplings won't gall, no matter how severe the strain. I **know** they won't! I've proved that I can 'make them up' as often as I like, without a sign of stripping. They have a perfect thread and taper—and won't go out of shape. And regardless of abrasion on the outside surface I've never seen a 'Harrisburg' 'give way.' And I've yet to find one to develop leaks."

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that he voices the sentiments of the great oil fraternity when he states that the United States Geological Survey and the United States Bureau of Mines, through the agency of their members and former members, have contributed as much to the economic development of the oil and gas industry of the world as all the other agencies combined. Much of the credit for this must go to the late J. A. Holmes, organizer and director of the Bureau of Mines, and the men who have since occupied their positions.

Most of the oil producing states have carried on important investigations, and published instructive and useful maps and reports relating to oil and gas. Among the noteworthy contributions to the science of petroleum geology and technology by the states are those of Edward Orton and J. A. Brownocher, Ohio Geological Survey; R. S. Blatchley and F. H. Kay, Illinois Geological Survey; C. N. Gould, Frank Buttram, L. L. Hutchinson, D. W. Ohern, C. W. Shannon, and others, Oklahoma Geological Survey; and R. P. McLaughlin, California State Mining Bureau.

Publications on Petroleum Geology

Except for a few reports in government or state publications, some scattered scientific magazine articles, and references in text books on geology, there was practically nothing in print touching on the geology of petroleum at the beginning of this century. Boverton Redwood's monumental "Petroleum and Its Products," which came out in 1896, was the first great treatise on the subject in English.

With the entry of the United States Geological Survey into the intensive study of economic geology came a series of epoch making bulletins on the oil fields of the Appalachian, Gulf, Mid-Continent, and California fields, and soon after its founding in 1910 the United States Bureau of Mines began its important series of technical papers on "The Technology of Production and Utilization of Petroleum." These two series of publications without doubt have had a tremendous influence on the oil industry. To these federal publications should be added the many contributions to petroleum geology and technology found in the state publications, the most important being those of California, Illinois, Ohio, Oklahoma, Texas and West Virginia.

Oil Production Methods, by Paul M. Paine and B. K. Stroud, 1913, was the first compact field book containing an outline of petroleum geology. Then followed E. H. Cunningham-Craig's Oil Finding, issued in London in 1914. The first edition of Dorsey Hager's Practical Oil Geology appeared in 1915. Admitting such shortcomings of this volume as any young author is liable to make, the writer still believes that this little book has had a great influence in popularizing geology among the drillers and operators. Of late years many important volumes relating to oil geology and technology have come from the press. Among them might be mentioned A. Beeby Thompson's Oil Field Development, London, 1916; Johnson and Huntley's Principles of Oil and Gas Production; Bacon and Hamor's The American Petroleum Industry, 1916 (geology by Clapp, Johnson and Huntley); W. H. Emmons' Geology of Petroleum, 1921; Hand Book of the Petroleum Industry, 1922, by D. T. Day and others; V. R. Garfias' Petroleum Resources of the World, 1923; Victor C. Alderson's Oil Shale Industry, and many others.

Two decades ago there were no serial magazines specializing in petroleum geology; now there are two serial bulletins (Bulletin of the American Association of Petroleum Geologists and Institute of Petroleum Technology Division of the American Institute of Mining and Metallurgical Engineers) devoted exclusively to oil geology and technology, and more than 20 magazines, journals and bulletins devoted in a large measure to publishing the papers of the petroleum geologists and technologists.

Progress in Oil and Gas Education

So far as the writer is aware, there were no institutions of learning giving any special courses in petroleum geology 20 years ago. According to R. H. Johnson,[24] one of the leaders in educational work in our profession, there are now at least 34 institutions of collegiate standing with special courses in petroleum geology and technology. The number of courses run as high as 13 (University of Pittsburgh), the number of class hours up to 468 (same institution), and the number of students specializing in this subject in a single institution as high as 60 (Stanford University). The writer is under the impression that some institutions now give a degree in petroleum engineering, and at least one, the University of Pittsburgh, has granted honorary de-

[24]Min. and Metall., Vol. CLXXXVI (June, 1922), p. 25.

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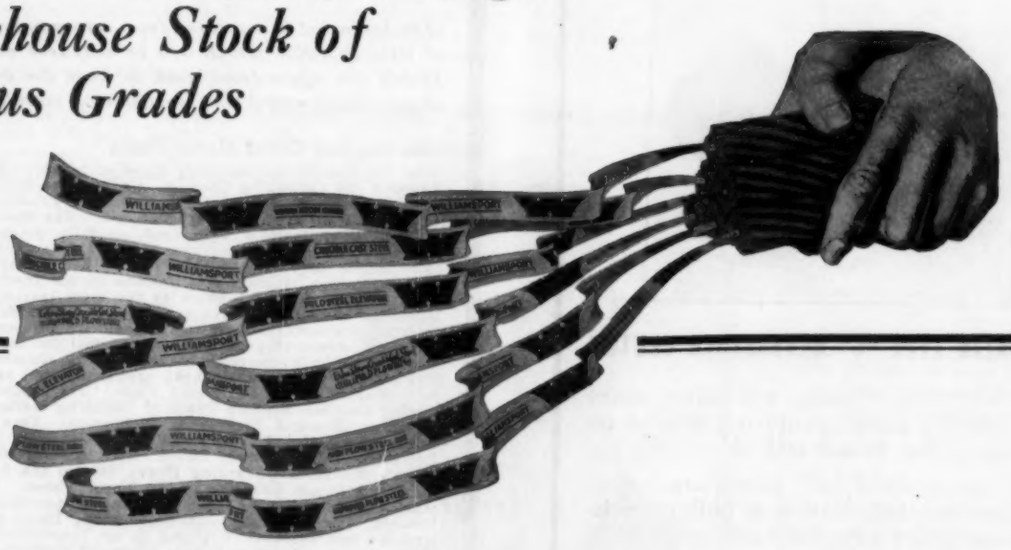

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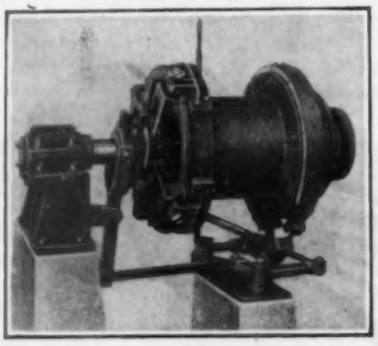

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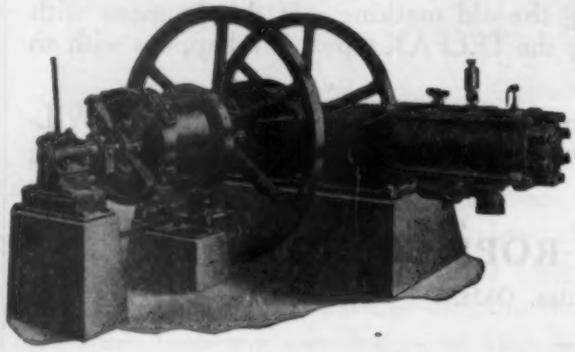

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Books On Petroleum

The knowledge gained through years of work and study by some of the most capable men in the oil industry is set down in the books listed herein. Order some of these books and profit by the experience of others.

(The following is reprinted from our complete catalog of OIL BOOKS, which will be sent free on request. Watch this space from week to week for description of practically every book available on petroleum.)

Gasoline and Other Motor Fuels

By Carleton Ellis, Consulting Chemist, and Joseph V. Meigs, Research and Consulting Chemist. Contains a complete description of practically every process of making gasoline and other motor fuels of promise or prominence. The theoretical and practical considerations have been carefully weighed, and in this book the practical operator will find many suggestions of value for the improvement of his plant. The converting of low-grade petroleum residues into gasoline by the cracking method has called for inventive effort of the most marked ingenuity, and more than 20 chapters are devoted to the description of cracking processes, as these will undoubtedly be foremost in the ways and means of producuing motor fuel for many years to come. The book describes the methods of obtaining gasoline from natural gas and casinghead naphtha as well as from shale oil. Chapter headings: Mixed Fuels. The Testing of Motor Fuels. Gasoline Refinery Practice. Refining Methods, Sulphur Removal, Chemical Treatment, Distillation. Forwood's Processes. Distillation Under Pressure. Cracking in Stills Under Pressure—Redwood and Dewar Process—Burton Process—Coast's Processes. Cracking Heavy Oils in the Liquid State. Tube and Retort Cracking in the Vapor Phase. Hall's Processes and Methods. Cracking in the Vapor State—Rittman Process. The use of steam in Decomposing Heavy Oils to yield Naphtha and Gasoline. Cracking in the Presence of Hydrogen, Hydro-carbon and Other Gases. Chemical Methods of Cracking Oils. Cracking and Distilling by Means of Fused Baths and Indirect Heating Means. Cracking With the Aid of Internal Heat. Cracking by Electrical Methods. The Condensation of Hydrocarbons from Gases. Benzol, Use as Motor Fuel and Manufacture. Alcohol as Motor Fuel. Shale as source of motor fuel. The Pyrogenetic Treatment of Asphalt. Appendix—Statistics on Petroleum Products. 728 pages, 6x9 inches, 206 illustrations, 2 folding plates, cloth.
Price, postpaid $10.00

Petroleum Refining

By Andrew Campbell, F. I. C., F. R. S. E., member of the Institute of Petroleum Technologists. Foreword by Sir Boverton Redwood. Devoted entirely to the subject of Petroleum Refining. Covers examination of crude oil, general departments, distillation, paraffin extraction and refining, candle manufacture, chemical treatments, distribution of products, engineering specifications. One volume, 138 illustrations, including 29 folding plates and 3 diagrams; also 11 tables.
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James W. Rich, petroleum geologist, announces the establishment of headquarters in suite 401-2 Bankers Mortgage Building, Houston, Texas, where he will be pleased to meet his friends and clients.

H. E. Frye, formerly with the Rex Machinery and Supply Company, has been transferred to the American Cable Company and is now assistant to M. G. Ensinger, Mid-Continent manager.

Joe R. Foltz, vice president and general manager of the Black Panther Oil Company, Laredo, was in Houston the past week.

D. Q. Brown, vice president of the Tide-Water Oil Company with headquarters at New York, and W. M. Welch, vice president and general manager of the Tidal Refining Company of Tulsa, inspected the properties of the Tidal Oil Company in North and Central Texas fields during the past week.

W. B. Buchanan of the Corsicana district offices of the Humble Pipe Line Company was a business visitor in Fort Worth late last week.

Levi Smith, president of the Big Lake Oil Company of Pittsburgh, Pennsylvania, arrived in Fort Worth Monday en route Reagan County section of West Texas, where his company is preparing to complete several additional wells in a week or two.

Harry H. Johnson of the scout and leasing department of the Gulf Production Company at Eastland, Texas, has been transferred to the district offices of the company at Fort Worth.

E. W. Marland, head of the various Marland companies, headquarters at Ponca City, Oklahoma, is in California traveling in his special car. He is spending his time at San Francisco and Los Angeles.

W. G. Skelly, president of the Skelly Oil Company of Tulsa, is in New York on a business mission.

T. J. Crumpton, general field manager of the California Petroleum Corporation, is spending most of his vacation on the water, making the trip from Los Angeles to New York on a boat. He is expected back in Los Angeles early in May.

A. S. Henley, chief geologist of the Houston Oil Company of Texas, returned Tuesday from San Antonio.

J. C. McCue, assistant manager of the producing department of the Texas Company, Fort Worth, Texas, was on a business trip to Houston last week.

Ed McAdams, general superintendent of the Marine Drilling Corporation and part owner of the Marine Oil Company, the largest independent operating company on Signal Hill, address the Society of Petroleum Engineers in the Chamber of Commerce Building at Long Beach recently. He spoke on "Problems of Drilling Signal Hill." Mr. McAdams is a recognized authority on rotary drilling, not only in California, but in the Mid-Continent as well.

DAN FREEL

General Superintendent of the Producers and Refiners Corporation's pipe line department who will enter business for himself shortly.

W. L. MacGready, vice president of the Sinclair Refining Company of Louisiana, accompanied by Thomas White, vice president of the Sinclair Refining Company, arrived in Houston Wednesday morning. Mr. MacGready and Mr. White left for New Orleans in the evening.

W. G. Allender of the Allender and Bean Drilling Corporation has returned to Okmulgee, Oklahoma, after a visit to the Craig area in Moffat county, Colorado.

Friends and acquaintances of Patrick Coyne were grieved to hear of his death in Houston, Saturday April 5. Mr. Coyne was employed by the Texas Company as foreman in the pipeline operations of the company in Mexico.

M. G. Ensinger, Mid-Continent manager for the American Cable Company, Tulsa, Oklahoma, is in California assisting in the opening of a Pacific Coast branch. Before returning to Tulsa, he will make a trip to Mexico.

H. W. Dodge, sales manager of the western district of the Texas Company, with offices at Denver, Colorado, attended the company's sales managers' meeting in Houston last week.

H. L. Brown has been made assistant superintendent of the land and lease department of the Marland Oil Company of Texas and has taken up his duties at the Dallas headquarters of the company.

Bill Morgan, contractor, who recently brought in the Morgan-Gribble 25,000,000 cubic foot gasser in the Carolina-Texas field near Laredo, is spending some time in Houston.

W. E. Gudry, who has been employed in the executive office of The Texas Company in New York, resigned his position recently to go into business for himself at Port Lavaca.

A. M. Tucker, foreign representative of the Hughes Tool Company, who has been in South America for the past six months, left Houston recently for New York City.

A. C. Hunter, employed with the Texas Company in New York City, is spending a few weeks in Houston.

T. B. Huett, field manager of Bryan & James Production Company, was in Houston recently securing casing for the test being drilled at Smiley, Texas.

Paul S. Odward, president of the Chicago-Texas Oil and Gas Syndicate of Chicago, Illinois, inspected the wildcat properties held by his concern in Sterling County section of West Texas last week.

Among the Houston men attending the National Petroleum Marketers Association convention being held in St. Louis April 7th to the 10th are the following: J. Kent Ridley, editor of The Filling Station, R. A. Fouts, president of the Deepwater Oil Refining Company and E. L. Mott, sales representative of the middle western district of the company.

Los Angeles, Calif., April 5.—C. C. Julian interests are blocking up a large acreage in the Mohave desert northeast of Daggett in the Dry Lake area and will drill two wells. The first well will be drilled near the Union Pacific railway between Kounz and Manix in section 11-10N-R3E.

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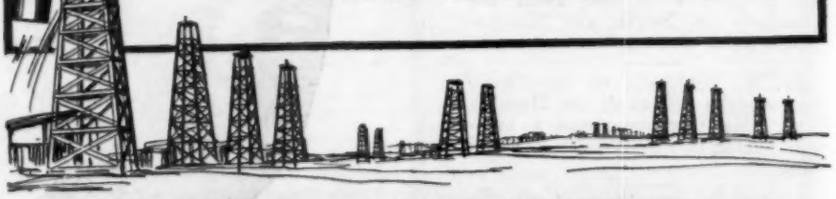

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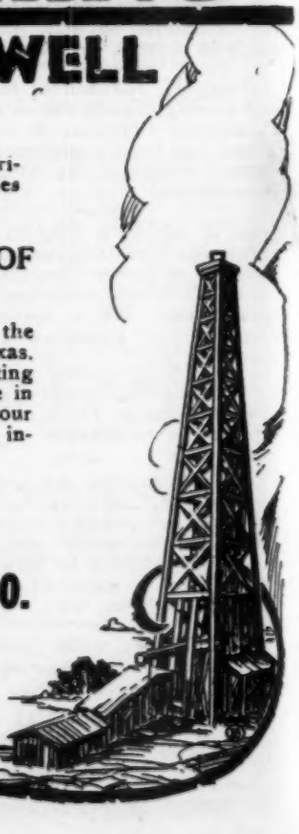


Say you saw it in The Oil Weekly

FIELD NOTES AND PRODUCTION STATISTICS

Torrance Production Has 'Em All Guessing

Daily average was up 11,000 barrels last week and is still climbing daily

Los Angeles, Calif., April 5.—The way the production is jumping at Torrance has 'em all guessing and they wonder just how much higher it will go before the turn comes.

During the past week, the daily average was around 56,000 barrels against 45,000 barrels a day the previous week. A total of 31 wells was completed the past week with the total flush production placed at 17,190 barrels. This included five wells producing 1000 barrels and over and a number producing between 500 and 800 barrels.

150 Drilling Wells

Most of the best wells are coming from the southeast and northwest sections of the field, where the wells are not so closely spaced and where the production is holding up nicely. In the older part of the field, many wells are going on the pump and they are holding up to about 100 barrels a day surprisingly well. The field now has 150 drilling wells, 100 of which are drilling below 3000 feet. Predictions are made in some quarters that the production may reach as high as 70,000 barrels a day before the downturn comes. This is a little high, however, and it would be a surprise if that total is reached.

Production Decline

In spite of the increase of 11,000 barrels a day at Torrance, the production in the Los Angeles basin was off about 6500 barrels a day the past week. This decline will be largely offset by the opening of a lot of shut in wells in the state, probably bringing about a slight increase in the state as a whole for the week. At the present time the Standard Oil Company is opening its shut in wells at Coyote wells and those on the Murphy lease near Whittier, which will increase that district close to 15,000 barrels a day when they are all open. It has been estimated that no wells will be shut in by April 15. If this is true, natural declines at the various fields will practically assure a steady decline for the state after that date.

A few of the authorities are now estimating that the month of April may see another addition to crude storage. It is practically assured that gasoline stocks will also be increased during the month. Taking these estimates into consideration, there is little chance of an increase in price, at least until some time in May. Of course if Mid-Continent prices during this time should be boosted, a raise might come sooner than expected.

Santa Fe Off

Santa Fe Springs production was off about 6000 barrels last week, with very few new wells coming in. The Standard completed the best well of the week, making 1000 barrels. Only 18 wells are actively drilling the field, 10 of which are drilling below 4000 feet. Many wells are being plugged back to the Bell sand with considerable success, as the Meyer sand peters out. The matter of placing a bean or nipple at the bottom of the tubing string is

(Continued on page 47)

CALIFORNIA FIELD OPERATIONS

The following table from statistics compiled by State Oil and Gas Supervisor R. D. Bush for California for the past several weeks gives a true insight into field activities:

Month of— ..	New wells started	Water shutoff tests	Deepening jobs	No. wells aband.
*June	120	195	59	22
July	94	145	46	23
*August	96	141	41	26
September	122	194	39	36
October	114	131	38	25
November	100	151	48	23
*December	105	181	37	32
Week ending—				
January 5	34	22	18	3
January 12	24	27	6	10
January 19	33	33	10	7
January 26	29	29	14	3
February 2	31	18	12	12
February 9	23	24	9	21
February 16	45	21	15	5
February 23	26	34	13	9
March 1	24	35	13	9
March 8	23	30	18	8
March 15	34	39	13	29
March 22	29	50	15	15
March 29	32	29	22	38

*Denotes months with five weeks.

Imports of Petroleum at Principal United States Ports

The following represents the total imports of crude oil for the month with the current month given by weeks:

	Atlantic Ports						Gulf Coast Ports					Total at All Ports
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	N. Orleans Baton Rge.	Port Arthur Sabine Pass	Tampa	Total	
April	370,000	669,000	1,074,000	625,000	591,000	3,319,000	1,615,000	1,020,000	1,135,000	168,000	4,362,500	7,681,500
May	344,000	515,000	1,026,000	437,000	615,000	2,937,000	1,351,000	910,000	1,184,000	127,000	3,582,000	6,519,000
June	314,000	421,000	1,791,000	755,000	809,000	4,090,000	1,515,000	1,142,000	1,062,000	229,000	3,948,000	8,038,000
July	287,000	465,000	1,806,000	448,000	898,000	3,876,000	1,471,000	1,120,000	833,000	92,000	3,516,000	7,392,000
September	268,000	565,000	1,744,000	660,000	686,000	3,923,000	1,776,000	1,397,000	880,000	224,000	4,277,000	8,202,000
October	365,000	292,000	1,194,000	536,000	816,000	3,203,000	988,000	1,330,000	380,000	50,000	2,248,000	5,951,000
November	223,000	395,000	1,194,000	576,000	757,000	3,145,000	1,478,000	1,000,000	551,000	111,000	3,287,000	5,432,000
December	474,000	574,000	1,243,000	606,000	1,024,000	3,917,000	2,019,000	1,832,000	933,000	259,000	5,043,000	8,960,000
January	398,000	531,000	1,060,000	376,000	949,000	3,314,000	1,295,000	887,000	689,000	15,000	2,936,000	6,250,000
February	520,000	527,000	639,000	458,000	771,000	2,865,000	1,558,000	1,284,000	525,000	195,000	3,562,000	6,427,000
March 1	185,000	236,000	192,000	66,000	606,000	1,285,000	401,000	253,000	236,000	55,000	945,000	2,230,000
March 8	136,000	65,000	128,000	141,000	254,000	824,000	585,000	400,000	206,000	85,000	1,276,000	2,100,000
March 15	200,000	128,000	393,000	188,000	129,000	1,038,000	454,000	36,000	175,000	40,000	705,000	1,743,000
March 22	60,000	255,000	187,000	107,000	366,000	975,000	415,000	450,000	188,000	51,000	1,104,000	2,079,000
March 29	221,000	50,000	343,000	.....	288,000	902,000	491,000	355,000	311,000	70,000	1,227,000	2,129,000

NOTE—Figures by American Petroleum Institute.

Receipts of California Oil at Atlantic Coast Ports

The following shows the receipts of California oil at Atlantic Coast ports by months with the current month given by weeks:

	Atlantic Ports						Gulf Coast Ports					Total at all Ports
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	N. Orleans Baton Rge.	Port Arthur Sabine Pass	Tampa	Total	
March	442,000	184,000	1,355,000	496,000	615,000	2,691,000	.....	.....	.....	.....	.....	2,691,000
April	105,000	256,000	2,456,000	502,000	320,000	3,639,000	.....	478,000	.....	.....	478,000	4,117,000
May	444,000	72,000	1,259,000	764,000	964,000	3,553,000	.....	300,000	53,000	.....	353,000	3,906,000
June	821,000	160,000	3,206,000	826,000	808,000	5,821,000	.....	664,000	.....	.....	664,000	6,485,000
July	443,000	75,000	2,068,000	741,000	699,000	4,080,000	.....	559,000	.....	.....	559,000	4,639,000
August	329,000	229,000	2,956,000	836,000	683,000	5,033,000	.....	970,000	70,000	.....	1,040,000	6,073,000
September	1,028,000	237,000	2,581,000	621,000	443,000	4,910,000	.....	703,000	.....	.....	703,000	5,613,000
October	779,000	224,000	2,503,000	779,000	429,000	4,714,000	.....	746,000	.....	.....	746,000	5,460,000
November	591,000	155,000	2,302,000	584,000	271,000	3,903,000	.....	935,000	.....	.....	935,000	4,838,000
December	454,000	215,000	2,901,000	813,000	753,000	5,136,000	.....	729,000	.....	.....	729,000	5,213,000
January	619,000	77,000	3,156,000	659,000	503,000	4,660,000	.....	615,000	.....	.....	615,000	5,275,000
February	326,000	145,000	2,811,000	842,000	75,000	4,199,000	.....	810,000	.....	.....	810,000	5,009,000
March 1	110,000	.....	1,042,000	134,000	70,000	1,356,000	.....	.....	.....	.....	.....	1,356,000
March 8	94,000	77,000	510,000	303,000	143,000	1,127,000	.....	.....	.....	.....	.....	1,127,000
March 15	.....	.....	516,000	245,000	50,000	811,000	.....	.....	.....	.....	.....	811,000
March 22	94,000	.....	667,000	91,000	150,000	1,002,000	.....	.....	.....	.....	.....	1,002,000
March 29	.....	.....	617,000	216,000	.....	833,000	.....	.....	.....	.....	.....	833,000

Note—Figures by American Petroleum Institute.

(U. S. Completions Begin Page 57)

Average Daily Production for all U. S. Fields

Oklahoma

	Past Week	Prev. Week
Burbank	109,620	101,250
Bristow	50,160	49,320
Cushing	25,000	24,980
Osage (outside Burbank)	31,700	31,260
Tonkawa	35,260	36,650
Hewitt	21,540	21,980
Okmulgee	19,900	19,980
Healdton	15,890	15,870
Duncan and Walters	10,000	10,000
Wewoka	8,335	8,460
Cromwell	8,440	.....
Other fields	90,350	91,100
Totals	426,195	410,850

Kansas

Eldorado	16,580	15,750
Greenwood	16,930	16,100
Fox-Bush	5,925	5,945
Elbing and Peabody	9,630	9,740
Blankenship	3,480	3,530
Augusta and Douglas	3,540	3,555
Florence and Covert	2,835	2,845
Leon and Weaver	1,240	1,245
Other fields	11,485	11,470
Totals	71,045	71,180

Arkansas

Smackover	105,000	109,270
El Dorado	12,626	13,280
Stephens	2,215	2,340
Totals	119,840	124,890

Louisiana

Haynesville	13,725	18,865
Caddo	10,035	10,100
Homer	8,120	8,145
Bellevue	5,325	5,365
Vinton	5,210	5,075
Bull Bayou	5,250	5,275
Elm Grove	1,000	1,050
Evangeline	525	510
Edgerly	365	365
Anse Le Butte	15	15
Totals	49,570	54,765

California

Los Angeles, Calif., April 5—The daily average production of the California fields the past week, compared with the previous week, with the number of producing wells in several fields the past week, was about as follows:

	Past Week	Prod. Wells	Prev. Week
Long Beach	191,000	390	202,000
Santa Fe Springs	80,000	305	86,000
Huntington Beach	54,500	251	55,000
Torrance	56,000	210	45,000
Dominguez	5,000	5	5,000
Others	267,500		654,000
Totals	654,000		654,000

Los Angeles, Calif., April 5. — The Shell Company is preparing to start its first well in the Bell vicinity where it holds about 400 acres under lease. The lease is made up of a large number of small tracts, blocked for leasing purposes. The first test is located a little over a mile southeast of Bell and just north of Vinedale. Standard, Geo. F. Getty and General Petroleum also hold smaller leases in this district.

Los Angeles, Calif., April 5.—A ship was christened with refined petroleum for the first time at Los Angeles harbor last Sunday. Refined oils donated by the larger refineries in Los Angeles vicinity filled a real champagne bottle and was broken over the bow of the new quarantine boarding launch S. D. Brooks. The wife of Major R. H. Heterick, head of the harbor public health department, broke the bottle.

Texas

GULF COAST

	Past Week	Prev. Week
Hull	21,280	20,900
Orange	14,250	14,595
Goose Creek	12,775	13,025
West Columbia	12,600	13,710
Humble	5,200	5,200
Sour Lake	4,575	4,675
Damon Mound	1,625	645
Saratoga	1,570	1,540
Batson	1,280	1,245
Spindle Top	850	860
Blue Ridge	700	565
Pierce Junction	580	570
Barbers Hill	325	300
Nacogdoches	110	110
Markham	90	75
Dayton	65	1,620
Stratton Ridge	50	60
Hockley	25	25
High Island	20	15
Big Hill	..	15
Richmond	..	..
Total	77,970	79,750
Total North Texas	278,580	282,135
Luling (Caldwell County)	17,000	19,000
Mirando	4,200	4,000
Somerset	3,000	3,000
Rockdale-Minerva	560	575
Total for Texas	381,310	388,460

NORTH CENTRAL

Corsicana-Powell	128,535	126,490
Mexia	33,000	32,000
Archer County	27,200	27,000
Burkburnett	20,345	20,300
Stephens County	19,075	19,000
Electra	19,285	19,285
Desdemona-Gorman	8,625	8,600
Eastland-Ranger	7,675	7,650
Young County	4,555	4,560
Moran-Shakelford County	3,795	3,795
Currie	3,200	3,200
K-M-A	1,290	1,300
Iowa Park-Shappell	1,265	1,260
Panhandle district	1,340	1,340
Strawn-Palo Pinto County	895	890
Mitchell County	785	780
Brown County	350	355
Petrolia-Clay County	310	310
Reagan County	205	200
Coleman County	140	140
Richland	135	135
Thrall-Williamson County	65	60
Jack County	35	35
Scurry County	30	30
Totals	282,135	278,580

Condensed U. S. Production for Twelve Months

(Stated in Barrels)

This table is carried each week by The OIL WEEKLY, and shows daily production average for each state or section. Figures for Oklahoma, Kansas, Texas, Louisiana, Arkansas and Mountain States are compiled by The OIL WEEKLY, while estimates for California and Eastern States are furnished by the American Petroleum Institute.

Daily average for month	*Mid-Continent	North Central Texas	Texas Coastal	†Texas Total	Kansas	Okla.	Louisiana	Eastern States	Wyoming-Montana	Calif.	Ark.	U. S. Total
August	726,981	217,208	105,966	323,148	89,998	419,775	97,936	120,750	83,938	375,000	28,834	1,618,765
September	716,107	207,467	107,790	314,932	89,760	418,880	101,857	114,200	80,490	387,000	33,135	1,540,371
October	714,906	200,465	115,130	316,370	90,404	424,037	97,502	116,375	86,412	423,750	34,127	1,489,005
November	711,521	199,223	114,150	388,376	91,098	421,200	93,410	116,375	106,092	450,000	77,225	1,668,776
December	692,702	170,187	111,819	242,010	87,508	435,007	86,513	114,900	108,679	484,000	107,732	1,722,349
January (1923)	708,372	184,885	115,628	304,790	86,720	436,767	81,205	113,500	123,254	517,500	111,920	1,770,645
February	712,007	180,364	96,984	286,493	85,298	446,345	78,068	112,500	110,328	587,500	101,346	1,805,496
March	720,287	184,582	89,873	283,355	86,012	449,693	75,352	109,900	118,580	653,000	108,630	1,888,522
April	756,381	192,148	92,320	293,780	86,133	478,100	76,854	106,000	127,860	711,250	102,099	1,983,026
May	793,774	203,776	90,905	304,032	85,500	504,498	75,368	109,125	125,680	700,125	109,033	2,010,840
June	824,297	217,162	92,240	320,250	85,255	521,880	72,745	110,300	129,559	773,000	133,592	2,159,818
July	866,665	274,330	91,795	378,335	84,785	508,405	70,085	113,000	137,300	851,000	132,395	2,275,305
August	826,982	278,574	94,398	393,780	82,741	464,416	68,739	112,625	137,909	866,250	123,000	2,251,966
September	830,517	371,730	93,649	443,461	77,078	421,763	68,935	108,400	157,742	858,700	127,955	2,269,176
October	876,059	408,036	84,120	511,483	71,362	371,657	65,303	107,750	139,912	823,125	125,145	2,240,741
November	935,975	479,383	82,747	580,700	69,337	387,253	64,701	108,125	151,225	768,275	124,188	2,253,806
December	729,591	283,130	78,033	378,478	68,444	378,017	61,138	110,300	146,770	723,845	120,049	1,987,041
January	685,540	243,120	75,085	334,485	67,815	374,605	59,125	108,000	144,735	698,965	114,255	1,906,985
February	729,933	254,180	81,131	362,849	68,183	407,568	59,449	104,500	141,775	675,425	114,726	1,934,476
March	762,684	284,874	78,567	388,221	69,864	407,946	55,783	97,800	128,352	650,790	119,869	1,917,023
April 1	775,820	278,580	84,085	381,310	71,045	426,195	49,570	100,000	123,000	654,000	119,840	1,924,960

*Includes North-Central Texas, Kansas, Oklahoma.
†Beginning February, 1923, Somerset, Mirando, Rockdale and Luling production included.
NOTE—Mexia production included in North Central Texas.

Torrance Production Has 'Em All Guessing

(Continued from page 45)

still the talk of the field. It is understood that several companies are planning to try out the plan first tried by the Wilshire Oil Company on three wells. The Wilshire increased its production about 2500 barrels by doing this at three wells. The wells are being swabbed to make them flow. Some of the producers are also cleaning out their pumpers and in some instances the wells flow while being pumped after cleaning.

Water at Long Beach

Water is slowly encroaching at Long Beach with production the past week showing a decline of 11,000 barrels a day, the total average for the field dropping below 200,000 barrels for the first time since the overflow started. The water encroachment is not especially severe at any one point, but rather is approaching from all sides as the sands are being drained. About 140 wells are still drilling in the field with 95 drilling below 4000 feet. But there are 113 shutdown wells in the field, standing idle. This includes edge wells, where it was seen that to drill further would be a waste of money. The Pan American is drilling its No. 1 Stone at 5400 feet with a nine and three-fourth inch hole at the bottom. This is the deepest hole in the field for that size hole and it is understood it is to be a thorough deep test.

Good Well at Huntington

The Standard the past week completed Bolsa 15 at Huntington Beach for 1200 barrels at 4717 feet, the best well for the field in many weeks. It is located in northwest part of the field where the Standard holds a large acreage and where the producer is not closely offset on all sides as is the case with most wells in the field.

Quiet at Dominguez

The week was quiet at Dominguez, formerly known as Compton. The Union's No. 1 Hellman was completed at 4169 feet for 400 barrels, but the well later quit. It will be drilled deeper in an effort to take in more sand. The Shell Company's No. 2 Reyes is drilling below 4100 feet in the oil sand and should be a completion next week. The same company this week made locations for Nos. 6 and 7 Reyes, directly south of Nos. 1 and 12 Reyes.

The Union Oil Company for the fifth time recemented casing in its No. 1 Rosecrans, at 158th street and Harbor boulevard, this time cementing at 3926 feet, which cemented off 16 feet of oil sand. It was found impossible to find a seat higher up for the water casing.

The Superior Oil Company during the week spudded a well directly across the road from the Union's Rosecrans.

The talent is watching closely the two wells drilling at El Segundo. The Fortuna Oil Company this week posted a guard at its well in this district and is drilling below 4100 feet, expecting to cement casing soon. Reports have it that this well has had shows. The Pan American test in this area has completed a fishing job and is ready to go ahead.

Union Oil Completes Its Santa Fe Springs Work

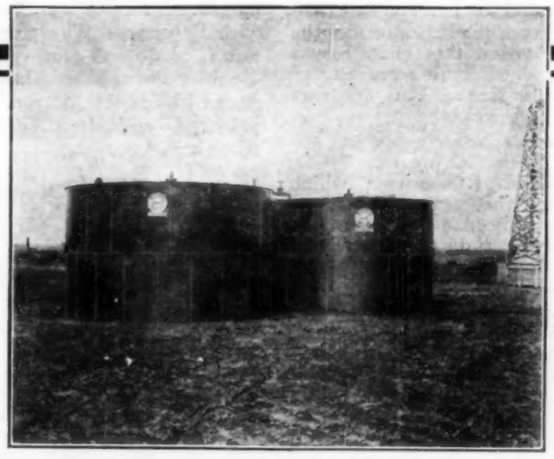
Los Angeles, Calif., April 5.—With but two wells being worked in the Santa Fe Springs field, both of which have been on production from the Meyer zone and are now being backed up to the higher Bell and Foix zones, the Union Oil Company of California has brought to a completion the most intensive drilling campaign the company has ever carried on in a single field.

Bell No. 25, brought in several weeks ago, was the last well put on production as an original completion. It was brought in from the shallow Foix zone. Bell No. 10 is now backing up to the Foix sand while Alexander No. 4 is plugging back to the Bell sand.

With the exception of these back-up jobs the Union is without a drilling well at Santa Fe Springs for the first time in over two years.

Through the work of this company can be traced the career of the famous district. It will be remembered that the company had a wildcat working in the apparently hopeless Santa Fe Springs district for years before its famous Bell No. 1 came in on October 21, 1921, and was the signal for the feverish activity that followed during the next two years.

After Bell No. 1 came in, the Union, like other companies, was forced to



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Shipments of California Petroleum Products Off First Quarter of 1924

Los Angeles, Calif., April 5.—Indications are that shipment of petroleum and its products from California during 1924 will be considerably under the total movement for the year 1923. The average monthly movement of petroleum and products during the six months period ending with December 31, 1923, was 11,245,970 barrels from Los Angeles Harbor against an average of 8,547,690 barrels monthly for the first three months of 1924.

Handwriting on Wall

Already the Standard of New Jersey has agreed that the California Petroleum Corporation shall ship an average of 21,000 barrels of crude daily to Bayonne, instead of 33,000 barrels, as called for in the contract made some months ago. It is supposed this change was made on account of coming scarcity of crude, already in sight. This contract was to run three years.

The Standard of New Jersey has another contract for California crude, with the Standard of California, which will run through this year. The Associated Oil Company also has a contract to ship California crude to Cities Service Company on East Coast, which will run through the year.

Union's contract with Prudential will expire around middle of year and it is practically certain that it will not be renewed. Other contracts, as they expire, are not renewed.

Fuel Oil Movement

A glance at accompanying tables will show that the movement of fuel oil is holding up and actually showing an increase. During January a total of 1,210,030 barrels of fuel oil moved to all points from Los Angeles Harbor, more than a million barrels of which went to foreign ports. The movement of gasoline appears to be showing a decrease probably due to winter months, but may increase with the coming of summer.

It is thought, judging from an early estimate, that California produced about 20,250,000 barrels of crude oil in March, an increase of almost one million barrels over February, due to opening of shut in wells and also to length of month of March compared with February. Therefore it is a question if crude was removed from storage —rather it appears that storage was added to. If this is true, an increase in price of crude in the state will have to wait awhile.

Total Three Months 1924

	Barrels
Crude	19,271,794
Fuel Oil	4,120,601
Gasoline	1,535,998
Kerosene	281,096
Distillates	290,596
Deisel	69,985
Lubricants	73,000
Total	25,643,070

Last Six Months in 1923

The following is the movement from Los Angeles harbor last six months in 1923, all products:

	Barrels
Pacific Domestic	27,637,073
Atlantic Domestic	30,924,192
Foreign	8,914,553
Total	67,475,818

Of total foreign movement, 751,457 barrels went to Europe; 822,498 barrels to points on Pacific other than domestic; 3,194,562 to Latin America on East Coast; 1,831,592 barrels to Latin American on West Coast, and 2,314,444 barrels to Trans-Pacific points.

Three Months of 1924

Following is the record by months for January, February and March, 1924, in barrels of 42 gallons, moving out of Los Angeles Harbor:

	Crude	Fuel Oil	Gasoline	Kerosene
January				
Pacific domestic	2,122,382	131,125	115,958	11,949
Atlantic domestic	5,752,811	47,000	213,135	.....
Foreign	279,377	1,031,905	244,336	112,494
Totals	8,154,570	1,210,030	573,429	124,443
February				
Pacific domestic	1,912,659	177,748	106,503	13,300
Atlantic domestic	3,022,042	3,518	25,668	.....
Foreign	123,288	1,065,508	306,590	2,500
Totals	5,057,989	1,246,774	438,761	15,800
March				
Pacific domestic	1,707,346	202,047	112,333	20,853
Atlantic domestic	3,814,270	21,970	195,718	.....
Foreign	537,619	1,439,780	215,757	120,000
Totals	6,059,235	1,663,797	523,808	140,853

drill the land with a speed and intensity they knew would mean the rapid exhaustion of the oil pool, but which they were unable, because of competitive leasing conditions, to do otherwise.

During 1923, the company's heaviest year at Santa Fe Springs, a total of forty-two wells were brought in in this one field. Their total initial daily production was 91,000 barrels. In late June and early July of last year the Union had in excess of forty wells in process of drilling at Santa Fe Springs.

At the present time the Union is leading in production in the field and has some forty wells on production. Seventeen of these are on the Bell lease, six on the Farwell, five on the Meyer and Alexander and four on the Howard leases. Production, in view of the performance of the rest of the field, is holding up remarkably well.

The Union is especially well protected at the Springs. Holding some 800 acres in the center of production, they have been forced to drill it up rapidly and have gotten the big production of the flush years of the famous field. Inner sections of their Bell, Howard and other leases, however, will stand more development, and the company can expect a good yield from the Springs for years to come. At the present time, because of the activity at Dominguez, Rosecrans and on the company's new field in Colorado, no wells are planned for Santa Fe Springs.

Supply Companies Active In Establishing Branches

Winfield, Kans., April 11.—Increasing activity in this section of Kansas is bringing new business to Winfield and Arkansas City. Several of the larger supply companies have established branches in Winfield and others have the matter under consideration.

Among these are the National Supply Company with C. G. Cox in charge, the Oil Well Supply Company with Carl Foley of Eldorado, Kansas, in charge, and the Continental Supply Company with R. S. Clark in charge.

The Bridgeport Machine Company is meeting the needs of the field from the company's general offices in Wichita, Kansas. The Jarecki Manufacturing Company also has opened a branch store here.

In Arkansas City the Acme Foundry and Machine Company of Coffeyville, is considering establishing a branch, according to a visit recently made by E. L. Graham, general manager of the company.

Pay Half Million Bonus on 1000 Acres Wildcat Land

Los Angeles, Calif., April 5. — The Standard Oil Company of California this week paid $500,000 bonus for a lease on 1000 acres of land from the Los Angeles Investment Company in addition to one-fifth royalty and agreement to equally divide profits after all development expenses have been paid. In other words, the owners of the land are paid $500 an acre bonus, will receive 20 per cent of all production and in addition will share equally in the net profits.

Some time ago this company offered the Standard a lease of 400 acres in return for a real test hole. The hole was drilled to 1027 feet, after setting 15½ inch casing at 992 feet. The log of the hole showed sticky blue shale from 225 to 992; blue shale, streaks sand showing oil and gas from 992 to 1021 feet and oil sand showing both oil and gas from 1021 to 1027 feet. The well has been shut down for more than two weeks.

This land is located just west of Slauson Avenue and north of Inglewood, some nine miles from Los Angeles.

The Los Angeles Investment Company has about 11,000 stockholders who hold around 2,800,000 shares. The stock jumped from around one dollar to about $4.

Panoramic view of the Stroud field in Lincoln County, Oklahoma

Another Producer for Lincoln County

Fifth completion makes 1500 barrels— Wildcat in 2-13-6 dry at 4228 feet

Tulsa, Okla., April 9.—Lincoln County presented the Oklahoma operators with two subjects to discuss during the week. The fifth producer for the Stroud-Key West pool came in for 1500 barrels; the wildcat well of the Wilcox Oil and Gas Company in section 2-13-6 found the Wilcox sand dry at 4228 feet.

Although "doodle-bug" locaters had made the assertion that the extent of the Stroud pool would be confined to the area proved by the four first wells, the Roxana Petroleum Company disturbed their predictions by successfully completing Zollers No. 3. This well came in in the center of the south line of the southwest of section 1-14-6, for an initial flow of 1500 barrels of good oil from the sand at 4082 feet. The Zollers No. 3 was drilled to the 3000 foot mark with a rotary rig and was then standardized. The next well for the Stroud field will possibly be the J. A. Hull Mary McDowell No. 3, which is drilling near the 4000 foot mark.

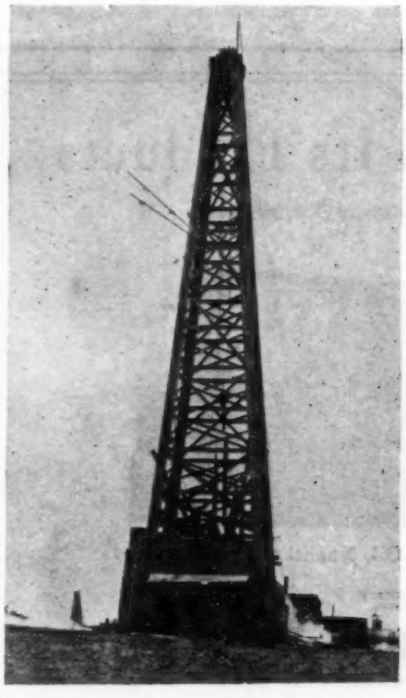
The Wilcox well in section 2-13-6 made a 90 barrel flow following the topping of what was apparently an oil bearing sand at 4228 feet. After drilling the well deeper, however, the flow was cut off and the last reports show that the well is now drilling in wet lime at 4300 feet. The Smulian No. 1, name allotted to this well, was thought to be a 150 barrel producer when the Wilcox sand was encountered last week.

With the added production of Zollers No. 3, production of the Stroud field is about 6000 barrels per day from five wells.

Three weeks have passed since the advent of the Hoffer et al well in the Cromwell pool. Today the well is making about 4600 barrels. The well, located in the northeast quarter of section 16-10-8, is making only five barrels less per hour than its initial production of 197 barrels per hour, which was made after pulling the tools out of the hole. Another example of the capacity of the sand in the Cromwell pool is the Tidal-Osage No. 1 Harjo at the southeast of the northeast of section 21-10-8, which is making 900 barrels per day from the sand at 3472-86 feet. The initial production of this well was given as 950 barrels per day, which means that the well has only lost about 50 barrels since it came in. There now seems to be no reason why wells in this pool will not hold up better than those of Wewoka.

The present daily production of the Cromwell pool is 8441 barrels from 10 wells.

In Southern Seminole County, William McDougall, pioneer oil man of Tulsa, who is credited with opening up two new pools for Kansas in former years, has a well with a hole full of oil in his Belle Dindy No. 1 in the center of the southwest of the southwest of section 20-6-7. A 3,000,000 foot gas sand was found in the well last week at 2670 feet, but this was bradenheaded off and the well was drilled to its present depth of 2680 feet. As this is a new sand for the district, the new pay will be named in honor of its finder, McDougall. The oil which is coming from a sandy shale is black and very heavy. This well is not far from T. B. Slick's Mingo No. 1, which was a large gas well some time ago and which afterwards filled up with water from above. However, during the last few days, drillers have been successful in cutting off the water and Mingo No. 1 is a real gas well.



Roxana Petroleum Corporation's Zollers No. 3, the latest completion for the Stroud field which came in making 70 barrels an hour.

Two disappointing events have just happened in the Wetumka pool in Hughes County. The Papoose Oil Company drilled into water in its Simon No. 1 in the center of the southwest of the southwest of the northwest of section 9-9-9 and the Prairie Oil and Gas Company found a dry sand in their well in the northwest corner of section 21-9-9 from 3030-40 feet. The water in Simon No. 1 is 40 feet below the producing sand found in the discovery well in the same section.

The Kingwood Oil Company deepened its producer in the southwest of the northwest of the southwest of section 3-9-9, Wetumka pool, to a total depth of 3311 feet, increasing production almost 100 barrels a day. The top of the sand in this well was found at 3304 feet.

Northwest of the Wetumka pool, Guyles and Daniels have apparently found a new producing area in their well in section 19-9-9. A sand has been encountered in the well at 3085 feet, which has yielded enough oil to fill the hole up 250 feet.

According to Homer T. Lamb, president of the Red Bank Oil Company, newspaper men of Oklahoma were slightly wrong when they reported that his wells in the Hominy pool of Osage County had stopped flowing. This report which was prevalent in Tulsa was wholly untrue as the wells are all good producers. These wells which are located in section 29-23-8, have a combined daily output of 4944 barrels. The Marland Refining Company's No. 4 Pettit in this pool came in the latter part of last week making about 1200 barrels per day from a sand at 2990 feet. Pettit No. 4 is located in the

southeast of the southwest of the southeast of section 20-23-8.

In the Vern station pool, west of the City of Tulsa, the Shaffer Oil and Refining Company has a 350 barrel well in their No. 1 Partridge in the southwest corner of the northwest of section 4-19-12. The initial production of the well was given as 410 barrels per day from a sand at 2051 feet, total depth. In the same pool, the Echo Oil Company has a 1200 barrel well in their No. 2 Lynch in the northeast of section 5-19-12, a direct offset to Echo's Lynch No. 1, which is producing 350 barrels daily.

The Olean Petroleum Company has drilled its Minnie Washington No. 3 well in Creek County six inches deeper and the flow has been increased to 70 barrels per hour. This well was completed about the middle of February with an initial production of 1200 barrels. Location is in the southwest corner of the southwest of section 32-17-8, North Bristow district.

In the Depew district of Creek County, the Prairie Oil and Gas Company has found a gas sand at 3218 feet which is good for 15,000,000 cubic feet after drilling 10 feet in. As the well is spraying some oil, tanks are being erected before the well is completed.

The well known as Vassar No. 2 is located in the northeast of the northwest of the southeast of section 17-15-8.

As a result of the successful completion of Young et al near Coweta three weeks ago, there are now about 15 wells drilling to the 760 foot sand which is producing 700 barrels per day in Young et al's No. 1 well in the southwest corner of the northeast of the southwest of section 11-17-16.

Production for the Papoose pool in townsite 9, range 9, Hughes County, for the week ending last Wednesday, is given as 1379 barrels from six wells.

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Spring Weather Starts Active Work in Kansas Districts

Wichita, Kansas, April 9.—With weather conditions in favor of the oil man in Kansas, the state is now entering upon a drilling campaign of unparalleled proportions. This week is the first one to bring with it suitable conditions for new development and the extent of activity is reflected in the big increase in completions.

In Greenwood County alone, a total of 19 wells were finished, a far greater number than has been reported during any other week this year. Out of the 19 completions there were 13 producers with a flush production of 1382 barrels of oil. All the dry holes were of semi-wildcat nature.

In the Eastman pool of Cowley County, Wilson and Martin, discoverers of that pool, have found the sand in their Eastman No. 2 at 2875 feet and it will make about 250 barrels per day, an amount equal to the production of the discovery well. These wells are located in section 5-31-6. Over in section 31-30-6 the Lewis Oil Company deepened its well and a slight increase was noted, however, the deepening does not seem to be of material worth.

In Cowley County, the wildcat area of southern Kansas, a total of five wells was completed and five dry holes were reported, most of which are located in township 32, range 4. Depths in the wells range all the way from 1500 to 2500 feet.

The two completions of the Polhamus et al's interests were leaders in producers for the week.

Smackover Field Gets Another Extension Well

El Dorado, Ark., April 7. — The Smackover field, which has been extended time after time during the last year and a half, was extended once again by the completion last Wednesday of the Unity Oil Company's No. 1 Alphin, in section 24-16-16. The well came in with an initial flow estimated at 3500 barrels per day of 23 degree pipe line oil from ten feet of sand at a total depth of 2055 feet. On Friday, April 4, it had settled down to around 1800 barrels per day, and it is still paying off.

This well is located two and a half miles west of the town of Norphlet, and about a mile southwest of the nearest production in the Norphlet district. Two other wells previously drilled at distances of about a mile southeast and southwest of this well showed oil in small quantities; and it is thought likely that another productive district has been revealed by the completion of this well.

Drilling activity is now very brisk in the Smackover districts, as a result of high priced crude.

Mirando Section Now Making Around 300,000 Barrels of Oil Per Month

Mirando City, Texas, April 10.—The Mirando district is estimated to be producing approximately 300,000 barrels of oil per month. During March the various pools shipped 574 carloads or approximately 150,000 barrels and it is estimated that one-half that amount is going into storage, the Magnolia Petroleum Company alone having half a dozen 55,000 barrel tanks at Oilton. Considerable crude is being stored on leases. With 45 rigs running, production is destined to come up rapidly.

Drilling operations are suspended on the lease of the Laurel Oil Company which produced the 7000 barrel gusher well pending the outcome of a dispute with the State of Texas over title. The No. 5 however is producing steadily at the rate of 1400 barrels a day making it the best well in the Laredo territory.

The Shaw test on the Ojuelos grant encountered 60 feet of sand and showed both oil and gas. Casing is being set at 2345 feet for a testout.

Tyson et al on Survey 230 about five miles south of Randado in Jim Hogg County, went through sand at 200 feet that gassed heavily. Another sand is known to be at 1200 feet and it will be tested for oil.

Neal et al on Survey 612 cored into a rich oil sand at 1904 feet which they will test for production. Casing has been set at 1986 feet. This well is southwest of Bruni.

J. W. Pippin's test in Jim Hogg County is repairing boiler troubles while the Weber Oil Company's test has a fishing job due to twisted off drill stem. It may be sidetracked. Zapata test on the Oscar Thompson ranch is down 1400 feet.

A. D. J. Oil Company is drilling at 3620 feet on survey 1127 of the Pratt Coleman ranch. Location has been made by the Brooks et al on the western half of Survey No. 684 south of the Carolina-Texas gas wells.

The following completions were made in the fields recently: No. 4 Cin-Tex Petroleum Company on block 50 of the Los Ojuelos grant, 150 barrels; No. 6 Wheatley et al on block 50 of the Los Ojuelos grant, 100 barrels; No. 1 Quigg-Olsan on block 49 of the Los Ojuelos grant, 200 barrels, and No. 58 Carnahan Producing and Refining Company, 70 barrels. Plugs were drilled out of the O. W. Killam test on the Albercas grant and the open hole was bailed. Oil showed heavily. The hole is being cleaned out and a liner will be set.

In the Wolcott pool, No. 4 Chandler and Gier is bailing oil at the depth of 1768 feet. It will make about 100 barrels daily on pump. A derrick has been erected for No. 5. Tools are being moved for No. 6. H. H. Palmer spudded in last week and is now below 900 feet. The Weslaco Oil Company encountered some oil at the depth of 1805 feet, but is having trouble with water.

In the Oilton field, the Southwest Texas Oil Company on Survey 1008 is drilling at 2300 feet. The No. 2 Witherspoon Oil Company on Survey 1007 is drilling below 1490 feet.

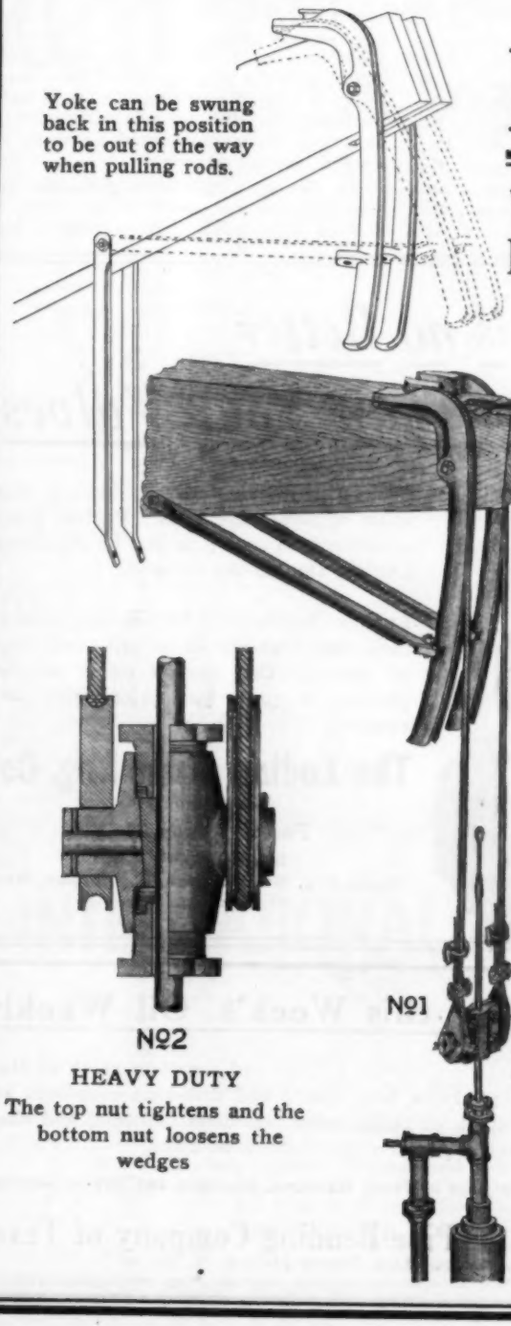
In the Bruni field, the No. 3 Cole Petroleum is pulling liner. Efforts are beng made to shut off water in No. 2. Considerable gas is shown in this test.

In the Andrews gas field, R. S. Howard is drilling below 700 feet. Location has been made for the No. 2 Andrews Petroleum Corporation.

In the Carolina-Texas gas field, The Carolina-Texas Gas Trust is drilling below 600 feet in hard lime and rock. Morgan-Gibble is preparing to move tools for No. 2, on Survey 336.

In the Aviator pool, the Andrews Petroleum Corporation is preparing to resume drilling operations at 2120 feet. The Black Panther Petroleum Company is drilling below 1600 feet. The Cornhuskers Oil Company set casings in Nos. 1 and 2 and erected a derrick for No. 3. The Rio Grande Petroleum Company is drilling around 1000 feet in No. 8. The J. K. Hughes Development Company is drilling in No. 10 and Radio Oil Company is drilling in No. 6.

In the Mid Ojuelos pool, the Cin-Tex Petroleum Company is moving on No. 5 with location 600 feet east of No. 4. The Olsan-Quigg is preparing to erect derrick for No. 2. The Wheatley et al is moving on tools for No. 7, an offset of Nueva Oil Company's No. 1.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Production in Gulf Coast Takes Slump Despite Crude Increase—Few New Wells

Houston, Texas, April 11.—Completions in the Texas Coastal fields barely held their own for the week just closed. In spite of an advance in the price of crude late last week, and continued weather favorable for field work, only one more well was brought in this week than was reported during the previous eight days. The total number of completions reported was 13 as compared with 12 last week.

Production failed to hold up to the mark set last week. The small size of the wells brought in held the total amount of oil recovered down to 78,005 barrels, more than 1000 barrels less than was reported last week.

Hull was the only district that showed an increase in production but this was offset by decreases in all other of the big fields. The Republic Production Company got a 2500 barrel well in its Dolbear 57, a workover, at 2700 feet. No. 23 belonging to the same company, was a dry hole at 2775 feet. Yount Lee got a salt water well in his No. 6 Taylor Fee 1, at 3525 feet. Dry holes were abandoned by both the Humble Oil & Refining Company and the Empire Gas & Fuel Company, and the Sun Company and the Mecom Oil Company each brought in a 75-barrel well.

Since the first of the year, Hull has been showing more activity than any other field in the entire Gulf Coast section. Considerable attention was attracted to the field in February when Dolbear 76 came in as a 10,000 barrel well, and a little later, when the Humble Company got a 15,000-barrel producer in its Sterling 1, it looked as if Hull were destined to boost production materially in this area. However, the Sterling well died shortly after it was brought in and no other well of like capacity has been discovered. The field shows a total of 46 completions since the first of the year, the number increasing with each month. During January, five wells were reported; this number was increased to 11 in February, and March boosted this figure to 19. So far in April, 11 completions have been reported, and with more than 30 outfits in operation, it is quite probable that this month will see twice as many wells completed as were reported during March.

At Goose Creek and Orange, two completions for each field were reported this week. At Orange, both wells were workovers; one resulted in a producer good for 50 barrels, and the other, the Orange Petroleum Company's A-1 Chesson, made 1200 barrels from a sand topped at 3700 feet.

The Humble Oil & Refining Company's Schilling 18 made 150 barrels at Goose Creek, from a depth of 1860 feet. In the same field, the Sun Company's No. 17 B. Smith was good far 200 barrels at 2500 feet.

The other completions were distributed according to fields as follows: Blue Ridge, 1; and Batson, 1.

The trend of activity in coastal fields can be presented by a study of completions since January 1. Each month has brought increases that approximately doubled those of the preceding month. During January, the total number of wells completed in all coastal fields reached only 11. This number jumped to 33 during February. In spite of the fact that March was the worst month of the three from the standpoint of weather, the total number of completions reported was 62, and up to the present time, April has shown 25 wells including some that have been worked over and some that are new producers. This brings the total number of completions during the year up to 132. Of this number 105 have been producers and 27 have been either dry holes or salt water wells.

Completions have been distributed according to fields as follows: Hull, 46; Orange, 32; Goose Creek, 22; Batson, 12; Sour Lake, 7; Richmond, 4; Spindle Top, 3; Blue Ridge, 2; Barbers Hill, 1; West Columbia, 1; Big Hill, 1; and Wharton County, 1.

Wildcatting in the coastal area is more or less limited with perhaps not more than a dozen wells in the entire district, that can be classed as rank wildcats. There are numerous tests in the vicinity of some of the older fields that might be classed as semi-wildcats inasmuch as they are drilling where the structure has not been very well defined.

Two Good Producers for Luling Field This Week

Luling, Texas, April 10.—Two good producers and a gas blowout which wrecked a derrick featured this week in the Luling territory. In Guadalupe County, No. 11 Marines of the United North and South Oil Company blew in for 4000 barrels, one of the best wells in the new Guadalupe County pool. Just a few days prior, the same company had completed the No. 12 on the same lease for about 2000 barrels.

Sunday the Magnolia Petroleum Company brought in its No. 1 Schubert for 1500 barrels offsetting the United's No. 2 Shanklin. This is one of the best wells in that part of the pool. The Magnolia's well indicates a widening of the field. It will be deepened somewhat in completion and should make more oil.

The first gas blowout of consequence in the history of the pool occurred during the week when gas wrecked a derrick on the No. 1 Allen of the C. C. Cannan et al. This damage has been repaired and the well is again in active operation. It should widen the field almost a mile if it comes in with oil as now seems probable.

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Gas Field Opened in La Salle Parish

Wildcat blows in from depth of 1445 feet —Making between 30 and 40 million

Shreveport, La., April 7.—News was received here today of the opening of an entirely new gas field near Urania, on the Iron Mountain Railroad, in La Salle Parish. The discovery was achieved by the Stovall Drilling Company on the property of the Central Lumber Company in section 27-10-2e, about three and a half miles southeast of Urania, and about 25 miles southeast of Winnfield. The well blew in from a depth of 1445 feet, with the drill stem still in the hole, and since only a small amount of surface casing had been set a crater has already begun to form. It is estimated to be making between 30 and 40 million cubic feet of dry gas per day.

This well is a rank wildcat, being located 45 or 50 miles south of the Monroe gas field. Drilling was begun on this structure in 1920 by the Simms Oil Company. Since then, three 1500 foot tests have been drilled in the immediate vicinity by the Urania Petroleum company of England on the property of the Urania Lumber Company. All three of these wells yielded showings of gas or oil, as has been recorded from time to time by The OIL WEEKLY.

Very little prospecting has been done in this section of the state, in comparison with the intense search which has been conducted in the northern parishes, and except for the showing obtained from the earlier wells drilled near Urania, this discovery comes as a distinct surprise. The Urania Petroleum Company's first well, completed in August of last year, showed a considerable quantity of 20 degree oil from a sand logged at 1522-38 feet, and its third well, completed in February of this year, showed gas at 1525 feet. Both of these tests are located in section 20-10n-2e. The showings of oil in the earlier wells suggest to the minds of local operators the possibility that the structure may later produce oil in commercial quantities, after the gas head has been blown off, or from lower structural levels.

Cotton Valley

It is believed that action is about to be begun at Cotton Valley, as seven new locations have been announced by major operators in that district. The Fortuna Oil Company has made a location for its No. 1 well on the Cox land, in the northwest corner of the southeast quarter of section 23-21-10, about one and a quarter miles south of production and a stake has been driven for the same company's No. 2 Merritt, to be located in the northwest corner of section 14-21-10, on the same lease as its No. 1 Merritt, which is now producing at the rate of more than 200 barrels of oil per day. The Ohio Oil Company has made a location for a second well on its Babb lease, in section 14-21-10, offsetting the Louisiana's productive forty. The Ohio's surveyors have also been busy on its Holloway lease, in section 23-21-10. The Humble Oil and Refining Company has made a location on its forty, located in the northwest quarter of section 12-21-10; and a stake has been driven to mark the location for its No. 1 Bodcau Lumber Company in the northwest corner of the southwest quarter of section 14-21-10, offsetting the producing wells of the Fortuna and Ohio companies.

The Ohio's No. 1 Merritt is paying off regularly at the rate of around 100 barrels per day through a one and a half inch choke, and the Louisiana's well is averaging around 250 barrels of oil per day through a two and three-quarter inch choke.

The Fortuna Oil Company's Pruitt test in section 17-21-9 has been bailed dry in four feet of sand at a total depth of 2680 feet. The formations in this well have been encountered at much lower levels than in the producing oil and gas wells to the west of its location. The Fortuna is drilling at 3435 feet in its No. 1 Staten, in section 31-22-10.

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Imperial Oil Company Prepares to Resume Prospecting at Fort Norman

Calgary, Alta., April 7.—An important feature of development work in Western Canada is the announcement that as soon as navigation opens on the northern rivers a drilling crew in charge of W. H. McKinnon will be sent north by Imperial Oil, Ltd., to resume work on the discovery well at Fort Norman. This well was deepened last season before the crews came out, somewhat increasing the production, and it is planned this season to carry the hole still deeper.

In East Central Alberta, British Petroleums, Ltd., is bringing in two doubledeck rotary outfits for further drilling in the vicinity of its No. 2 heavy oil producer in the Irma-Wainwright area. It is likely that six tests will be put down during the season. Derrick timbers for four wells are on the ground, casing for six, aud tubing for three, and it is planned to lay a pipe line from No. 2 well to the railroad at Wainwright, a distance of five and one-half miles, and to build two 1000 barrel tanks. Derricks will be erected ahead of the drilling so that immediately one well is completed the rotary outfit can be transferred to the next.

In Southern Alberta, Sweet Grass Oils., Ltd., has been organized with D. A. McDonald of Vancouver, British Columbia, as managing director, to drill in the Montana and Alberta fields. Officers of this company include Gen. J. Duff Stuart, president; J. J. Banfield, vice president; J. G. Todhunter, treasurer; and Major Angus McAllister, W. J. Volsey and E. A. Riddell, directors. The company has drilling rights on 20,000 acres of the McIntyre ranch, south of Magrath, and its No. 1 test will be drilled this spring on the Milk River Ridge, about 34 miles south of Lethbridge.

At Lethbridge, the Standard Refining Company will start running this month on Kevin-Sunburst crude. The only test now active in the Canadian Sweetgrass district is the Canadian Oil and Refining (Rogers syndicate), which is down around 1800 feet on section 29-1-11w4, east of Coutts. It is reported that the Lethbridge Oils (Baalim syndicate) test on the Quarantine reserve, section 12-1-15w4, will resume this spring at 2030 feet. In Pakowki Lake district the Sanctuary Oil Company test on section 9-5-8w4 is again shut down owing to the illness of the head driller, H. C. Smith.

In Delia district a shallow gas well put down by the Prairie Natural Gas Company tested 90,000 cubic feet a day, and additional drilling will be done. This shallow gas will be used in a carbon black plant. Another carbon black plant is projected in the Many Island Lake fields by American interests which recently endeavored to secure the Community Oil Wells, Ltd., holdings and equipment and have since secured leases of their own. A new test for oil is rigging up near Oyen, Alberta, financed by local men.

In the Ontario fields the Union Natural Gas Company's No. 249 deep test on the Mancell farm, which got salt water at 3643 feet, has been carried to the granite at 3682 feet and is now being pulled and plugged. Union's No. 248 Truckenbrod, east of Port Alma, is drilling at 3300 feet without a show. Eugene Coste & Company's No. 6 Malott farm, south of Tilbury, is drilling at 2355 feet on a deep test.

In Lambton County, High Pressure Oil and Gas Company's No. 2 at Rock Glen, near Arkona, is drilling at 3105 feet on a deep test. This is about 335 feet in the Trenton. A slight show was met at about 2600 feet in the Utica and traces of oil in the top of the Trenton limestone but no comemrcial production so far.

Thos. Johnston of Petrolia is working on a proposition to restore the production of the Petrolia field by chemical treatment, designed to remove the paraffin and sediment in the wells. A Niagara Falls chemical concern will send a representative early this month to test the process on a string of 10 wells and if the test is successful further operations will be undertaken.

Island Oil & Transport Company Moves Offices

Tampico, Tamps., April 11.—An announcement is made by the Island Oil and Transport Company of the removal of its quarters from the Aragon building to the fourth floor of the electric light building.

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Improved Weather Conditions Stimulate Field Activity in Eastern Districts

Pittsburgh, Pa., April 11.—Weather conditions have improved considerably during the past few days in the Eastern area, and a week or so of sunshine is bound to bring forth new drilling operations in all fields east of the Mississippi river. Crude prices are standing as they have been for some time.

Fewer completions were reported for the week from the numerous fields of the Eastern group as compared with last week, but production shows a slight increase. The week shows a total of 116 completed wells, 29 of which were dry, 40 were gas wells, with an open flow of 67,250,000 cubic feet, leaving 47 oil producers, with a combined flush production of 1138 barrels. With 43 less wells than for the previous week, new production increased 102 barrels.

West Virginia completed more wells than any of the other Eastern fields; production was very small, but the gas volume was heavy.

Kentucky took second place, followed by Central Ohio. The completion of six oil wells by the Union Gas & Oil Company, in the Weir sand field of Lawrence-Johnson counties, in the Big Sandy valley, helped swell production in Kentucky to the tune of 220 barrels. Lee county came to the front with a 50-barrel well drilled by Hupp and Duff on the Mays land.

The striking of a 50 barrel well by the Heck Oil Company on the Davis lease, in Reedy District, Roane county, was the outstanding feature of the West Virginia field. Bowser & Ekas drilled a 10-barrel pumper on the Willis lease in Union township, Wood county. Other wells ranged from two to five barrels. The best gas well was drilled by Lambert & Company, on the Lambert lease, in Clay district, Ritchie county, with a volume of 5,000,000 cubic feet.

Pennsylvania completions were few, and consisted of three small pumpers and one gas well.

Southeastern Ohio completions consisted of small strippers and dry holes, but the Central Ohio field had an exceptionally good week for the finding of new production of oil within the boundaries of the old gas field. The Ohio Fuel Gas Company, drilled a test on the Bowers lease, in Cannan township, Wayne county, south of Cleveland. This well showed 85 barrels from the deep Clinton sand, and the Ohio Oil Company's No. 1 Hess lease, in the Wooster field of Wayne county, showed 75 barrels. The bringing in of a 102 barrel well by the Midland Oil Company, in a test on the F. L. Orr lease, in Bowling Green township, Licking county, from the Clinton sand at a depth of 3094 feet, brings that county once more into the limelight. The Carter Oil Company just drilled in an 80-barrel producer on the Settles lease in Hanover township, same county, also in the Clinton sand. In Holmes county, the Central Ohio Gas Company (Doherty interests) completed a wildcat well in the Clinton sand on the E. R. Martin lease, in Monroe township, Holmes county, that produced 30 barrels.

Two wildcat wells of importance were added to the Northwestern Ohio district, these wells being more than 50 miles apart, one on the north side of the old field and the other on the south side. These wells added a vast amount of good looking territory to the Trenton Limestone field. The well to the north was drilled on the King lease in Benton township, Paulding county by the U. S. A. Oil Company, with 50 barrels and the south well was drilled by Harmon, Lyons & Company, on the Boerman lease, in Cynthian township, Shelby county. This well was also a 50 barrel producer. These two tests have created a vast amount of excitement over the field, which is in line for a real active drilling campaign when the weather is such that supplies can be hauled. The area brought into prominence by these wells is more than 150 miles in length by at least 75 miles in width, and one of the largest single fields known in oildom. It extends from near the center of Indiana, on to the northeast across Northwestern Ohio to the south shore of Lake Erie. Oil is found on the north side of Lake Erie, in Ontario, Canada, in the same formation.

Illinois was credited with one dry hole in Wabash county, while Indiana failed to report any completions.

Western Kentucky Districts Showing Increased Activity as Spring Opens

Louisville, Ky., April 8.—The most important completion for the past week in the west Kentucky field was that of W. S. Raydure on the Mrs. Coop farm in the Sulphur Creek district of Cumberland county. This well when put on the pumping jack flowed and pumped at the rate of 70 barrels daily. It was finished in the sand below the Pencil Cave, at around 750 feet.

In Warren county the week's feature was Col. G. C. Foster's No. 4 on the Francis lease, northwest of Bowling Green, which came in for around 50 barrels flush at a total depth of 1107 feet, 132 feet below the Devonian black shale. It is the first deep well in the immediate vicinity and opens up a large amount of prospective territory in the deep pay. A large number of shallow wells, however, have been already drilled in this section, that are making consistent pumpers.

In Allen county, Bob Rehn's No. 13 Grubbs, in the Ganiesville district, made 18 barrels naturally at 283 feet, 46 feet below the shale. Sand was topped at 270 feet and was drilled in 18 feet. Another good well in this same district was House and associates' No. 3 on the Holder farm which showed for 10 barrels at 305 feet after a 20 quart charge.

In the Ohio county area, northern Kentucky, C. A. Leeper's No. 9 on the A. Stewart tract is a strong 22 barrel producer in both Jett and Barlow sands.

Many producing properties are changing hands in the western Kentucky field for prices ranging all the way from $1500 to $3000 per barrel, the latter price is being paid for the more settled production in the Davenport Pool of Warren county and the Gainesville Pool in Allen county.

One of the largest transactions for some time was the taking over of the Brownfield and Jenkins leases, of the Atlantic Oil Producing Company, by Onsel Brothers, of Rising Sun, Ohio. The same parties recently purchased the Mary Ferguson lease with 40 barrels production from the Huntington-Oklahoma Oil Company.

A large amount of new work is being started in all sections of the field and it is confidently expected that 1924 will be the banner year for the operators in this district. The new pool southwest of Glasgow in Barren county and the new find in Allen county as well as the re-opening of the Cumberland-Monroe counties fields has served to be quite a stimulus. Another section which will not be overlooked is the Owensboro district, in Hancock and Ohio counties, where over 50 producing wells have been drilled during the last year.

Operators in Warren county are now receiving $2.30 per barrel for their oil, as are those in the Hancock, Ohio, Daviess, Simpson, Logan and Allen counties. Barren, Monroe and Cumberland county operators are receiving $2.50 per barrel.

A well that proves that oil will be found in Clay County, Tennessee, near the town of Celina was brought in during the past week by the Neely Creek Company on the Spear farm, four miles south of the Kettle Creek pool. It filled up to the extent of 100 feet after a shot at 435 feet. It is conservatively estimated at five barrels.

Los Angeles Shipments of Crude Show Big Decrease

Los Angeles, Calif., April 5.—Only sixteen tankers left Los Angeles Harbor during the week ending Friday, carrying a total of 579,800 barrels of crude oil, 239,313 barrels of fuel oil, 74,000 barrels of gasoline and 80,868 barrels of distillate. The distillate went to Atlantic Refining Company at Philadelphia.

The shipments were less than half of the previous several weeks.

The record for the past two weeks follows:

	Past Week	Prev. Week
Tankers departed	16	26
Total crude moved	579,800	1,282,651
Total fuel oil	239,313	294,116
Total gasoline	74,000	261,891
Crude to Pacific	192,323	227,635
Fuel to Pacific	75,993	75,572
Gasoline to Pacific	.....	53,916
Crude to Atlantic	387,477	975,016
Fuel to Atlantic	.....	15,556
Gasoline to Atlantic	.....	71.070
Fuel to foreign	163,320	202,988
Crude to foreign	.....	80,000
Kerosene to foreign	.....	60,000
Gasoline to foreign	74,000	136,900

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Completions for Past Week in U. S. Fields

Oklahoma

Company, Well, Location—	Initial Production Bbls.	Depth
Carter County—		
Merrick-Kirk's No. 3 Cobb, C NE NW SW 5-3s-2w	40	2990
Paige Oil Co.'s McClure 5, C NW SW NE 27-2s-3w	¶	2992
Cotton County—		
Malernel et al's No. 1, C W L SE SW NE 29-2s-10w	*	2453
Creek County—		
Cosden's Warnakee 1, SWc NW SW 15-15-8	15	3403
Mid-Kansas' Sullivan 1, C NW NE SE 13-14-10	*	3239
Waite Phillips' Alec 1, SEc NE SW 27-17-8	*	3644
Phillips Pet. Co.'s Canada 7, NWc SW SE 14-16-8	*	3163
Cortez Oil Co.'s Wilson 4, SWc SE NW 22-16-8	6100	3133
H. F. Wilcox Oil & Gas Co.'s Post 5, SWc SE NW 33-15-10	225	3192
Harjo 8, SWc SE SW 35-16-8	700	3090
C. W. Titus' Starr 2, SWc NE NE 10-19-10	*	1842
Hughes County—		
Oklavania Oil Co.'s Bruner 1, SWc SE 17-9-9	550	3035
Kay County—		
Carter Oil Co.'s Clubb 6, C S L SW SE SW 10-27-5	790	3073
Comar Oil Co.'s Barnum 4, C E L SE NE SW 10-27-5	730	3027
Skelly-Phillips & Moore's Riggs 5, C N L NW NE SE 16-27-5	260	2996
Prairie O. & G. Co.'s Morgan 1, SW cor SE 33-28-5	*	3305
Morgan 2, SEc 33-28-5	*	1450
Pure Oil Co.'s McCassey 3, C S L SW SE NE 16-27-5	46	2986
Noble County—		
Walters O. & G. Co.'s Smith 1, C W L SW SE 14-20-1w	*	3283
Osage County—		
Sinclair's No. 12, C SE NW NE 15-27-5	1200	3060
No. 13, C N L NE NW NE 15-27-5	1310	3045
Cosden's Sands 9, C N L NW SE SE 10-27-5	500	2936
Tidal-Osage's No. 5, C NW NW 25-24-8	35	2189
No. 3, C S L SE NW 21-24-9	*	2434
No. 17, C N L NE NE SW 34-22-10	100	2313
Phillips-Delmar's No. 8, C E L NE SE SE 10-27-5	1200	3040
Phillips-Skelly's No. 6, C NE SW SE 23-27-5	*	3134
Osage Dev. Co.'s No. 35, C S L NE NW 35-29-11	57	923
A. M. Landon's No. 9, NEc NW NW 16-28-9	50	1634
Marland & Kay County's No. 1, C N L NW NW SW 15-24-8	20	426
Test Log Oil Co.'s No. 2, C N L NW NE SE 16-24-8	*	480
Foster & Norwood's No. 42, SEc NE NW SE 23-24-9	150	2147
Barnsdall Oil Corp.'s No. 8, NWc SW 17-23-12	20	1615
Titus et al's No. 2, SEc NE NE 23-21-10	360	2547
Gillespie's No. 22, C S L NE NE NE 8-20-12	160	2088
Marland's No. 3, SWc SE 20-23-8	1776	2830
Riverland Oil Co.'s No. 1, C N L NE NW 23-22-8	100	2816
Pawhuska O. & G. Co.'s No. 1, C S L SE NE SE 7-25-9	¶	1163
Owen Osage's No. 280, C E L SW SE 28-28-11	¶	1002
No. 270, C S L NW NW NE 4-27-10	*	2031
No. 278, SWc SE SE 10-27-11	¶	1914
No. 277, C E L NE SE NW 35-23-11	*	2154
No. 276, NEc NW 3-22-11	*	2400
The Texas Co.'s Munroe 3, NEc SW 3-27-5	480	2916
Munroe 4, SEc SW 3-27-5	180	2955
Munroe 5, C E L NE SE SW 3-27-5	700	2973
Munroe 6, C E L SE NE SW 3-27-5	400	2978
Munroe 9, C S L SE SW SW 3-27-5	200	2942
Munroe 12, C N L NE NW SW 3-27-5	200	2952
Pawnee County—		
Galvez Oil Co.'s Van Eman 1, SWc SE NE 17-20-7	90	2683
Osage County—		
Gypsy Oil Co.'s No. 1, C NE NW SE 4-27-5	2915	1440
No. 11, C SW NW SE 4-27-5	2917	1400
No. 4, C SW SE SE 10-27-5	2975	500
No. 6, C SE NE NE 10-27-5	2972	500
No. 12, C NW SW NE 10-27-5	2951	560
No. 8, C SW NW SE 22-27-5	3008	500
No. 4, SW NE 23-27-5	2996	3955
Seminole County—		
McMann Oil Co.'s King 1, SW NW 22-10-8	1694	3466
Tidal-Osage's Harjo 1, SEc NE 21-10-8	480	3486
Wilcox O. & G. Co.'s Bruner 1, NW cor SE SW 15-10-8	105	3514

Kansas

Company, Well, Location—	Initial Production Bbls.	Depth
Butler County—		
Shawver & Sutter's Hoyles 3, SEc SW SW 25-28-5	*	2875
Chatauqua County—		
Richie & Moore's Reed 1, SEc NE NE 6-33-9	*	2316
Cowley County—		
McNabb et al's Lierman 1, NWc NE NW 19-32-5	*	2510
Reiter Oil Corp.'s McFaddan 6, C S L SW SE 25-32-4	*	1486
Shawver et al's Sams 1, SEc NE NW 5-31-6	*	3005
Buffalo Trust Co.'s Keithley 4, SWc NW NE 36-32-4	*	1750
Watchorn Oil Co.'s Keithley 1, NW cor NE NE 36-32-4	*	2410
Elk County—		
Dietrick et al's No. 1, SEc 21-30-9	*	2462
No. 2 Smith, C SE NW 34-29-9	¶	1504
Mitchell & Perkins' Perkins 2, C SE SE 33-29-9	¶	1487
Ohio Fuel Co.'s Wheeler 2, C NE SE 29-29-9	¶	1540
Roth's Westfall 1, C N L NW SW 13-29-8	50	3020
Greenwood County—		
Magnolia Pet. Co.'s Klein 1, SWc 21-26-9	12	2412
Roth & Taurott's No. 3, NEc SW 11-25-8	*	2348
Polhamus et al's Holverson 1, NEc 27-24-9	75	2210

Experienced Contractors Organize Drilling Firm

Tampico, Tamps., April 11.—A new contracting firm to be known as the Jas. F. Martin Drilling Company, has recently been organized and will contract for the drilling of oil wells.

The firm is composed of Lee Flick, Homer Craig and Jas. F. Martin. All are experienced oil field men and have been in Mexico for many years. Homer Craig is the oldest in point of residence, having lived in Mexico since September, 1905. Lee Flick became a resident of the country in October, 1905, and J. F. Martin went into Mexican fields in 1912. Mr. Martin has been in the contracting business since he has been in Mexico and has built up a business that covers practically the entire country.

Company, Well, Location	Initial Production Bbls.	Depth
Lewis 1, SWc SE NE 11-24-9	275	2342
Orr Drlg. Co.'s No. 1, NWc SW 26-29-10	*	2165
Amerada Pet. Corp.'s Smith 1, NW cor SE SW 18-24-10	*	2462
Rogers et al's Agard 2, SWc NE 14-24-9	100	2198
Miller's Hellman 3, NEc SW 14-24-9	100	2197
McGinnis et al's Agard 5, SEc NW 14-24-9	140	2198
Phillips Pet. Co.'s Lewis 7, C NE NW NW 32-23-10	250	2325
Mission Oil Co.'s Thrall 32, C E L NW NE 32-23-10	100	2315
Thrall 22, C NW SW NE 32-23-10	200	2340
Pure Oil Co.'s Mason 4, NWc NW 26-23-10	50	2330
Empire O. & G. Co.'s Piatt 6, C SE NE NE 13-23-10	*	2703
Clipton 9, SEc NW 8-23-11	40	1959
Peese 2, C NW SE NE 15-22-11	40	1921
N. F. Clark et al's Anderson 2, C S L SE SE 5-28-11	*	2345
Davis 4, NEc SW NE 8-28-11	*	1912
International Dev. Co.'s Diggs 1, SE cor NE NW 5-25-13	*	900
Marion County—		
Chris Sheedy et al's Hart 1, SEc NW NW 33-21-5	*	2402

Texas

CORSICANA-POWELL

J. K. Hughes Dev. Co. Peck "A" 1	*	1800
Stowers & Peacock Donoho 1	*	1450
Simms Oil Co. Kellum 4	500	2985
E. L. Smith Oil Co. Cerf 2	200	2765

GULF COAST

Goose Creek—		
Humble Oil & Ref. Co. Schilling 18	150	1860
Sun Oil Co. B. Smith 17	200	2500
Blue Ridge—		
Gulf Prod. Co. Blakely "C" 48	150	2825
Batson—		
Ada Belle Oil Co. Paraffine 69	25	565
Hull—		
Empire Gas & Fuel Co. Lynd 3	*	4525
Humble O. & R. Co. Hankamar, wo	*	2650
Republic Prod. Co. Dolbear 23, wo	*	2775
Dolbear 57, wo	2500	2700
Yount Lee Oil Co. Taylor Fee 1 al 6	*	3525
Sun Co. Carr 1, wo	75	1855
Mecom Oil Co. Mecom 2, wo	25	2910
Orange—		
Edgerly Pet. Co. Corbello 6, wo	50	3575
Orange Pet. Co. Chesson 1, wo	1200	3700

MIRANDO

Webb County—		
Kirkpatrick-Lucas Trusteeship's 1	70	....
Cin-Tex Oil Co.'s Garcia 4	200	1735
Chandler & Gear's Ochoa 3	100	1780
Ochoa 4	100	1780
Carnahan Prod. & Ref. Co.'s 56	¶	....
Weslaco's Ochoa 3	100	1805
O. W. Killam's Bruni 2	35	1680
Wheatley et al's Garcia 6	90	1783

LULING

Guadalupe County—		
United North & South Oil Co.'s Marine 11	4000	....
Marine 12	2000	....
A. J. Baker 1	300	....

California

Torrance—		
Hackworth & Brunwin's No. 1	110	3707
Standard's Torrance Co. 4, wo	100	3654
Standards' Marble lease 3	750	3834
Standard's Dominguez 3	300	3891
Geo. F. Getty's No. 18	60	3785
Fortuna Oil Co.'s Clark 2	650	3786
Bush Voorhis' Fee 1	100	3825
Superior Oil Co.'s Joughin 18	800	3886
Torrance 13	100	4696
Joughin 19	1100	3870
Jack Darnell's Sloan 1	800	3820
International Dr. & Eng. 2	1000	3800
Julian Pet.'s Johnson 4, wo	400	3792
C. C. M. Oil Co.'s 29	600	3702

Company, Well, Location—	Initial Production Bbls.	Depth
Kettler 9	1400	3826
Kettler 14	1650	3840
Kettler 5	60	3780
Standard's Interstate 1	500	3882
Marble fee 5	700	3785
Petroleum Midway's Gish 2	100	3503
Dietrick 2	310	3782
Dudley 1	800	3806
Ford 1	400	3775
Keefe & Risdon's Carle 2	200	3795
Pan American's Thomas 2	800	3900
Fisher Gregg Synd.'s No. 2	400	3775
C. C. M. Oil Co.'s Kettler 4	100	3780
No. 41	1100	3740
Westland Oil Co.'s No. 1	600	3790
E. J. Miley's Torrance 2	400	3676
Pan American's Thomas 1	800	3880
Santa Fe Springs—		
Union Oil Co.'s Alexander 4, wo..	300	4700
Meyer 6	160	4725
General Petroleum's Jalk 10	35	4624
Standard's Santa Gertrudes 8	1000	4646
Petroleum Midway's Mattern 1-4	100	4595
Long Beach—		
Harmony Oil Synd.'s Lorraine 1	250	4700
Shell's fee 3	400	4952
Petroleum Midway's O'Neill 2	400	4395
Huntington Beach—		
Union's Copeland 6, wo	50	4717
Standard's Bolsa 15	1200	4711
Bolsa 2, wo	80	4321
Associated's Miley Keck 18, wo	35	4575

Louisiana

Company, Well, Location	Initial Production Barrels	Depth
Bellevue Field—		
Bliss & Weatherbee's Fee B-5, 15-19-11	*	452
Fee B-6, 15-19-11	*	450
Caddo Parish—		
Muslow Oil Co.'s Brown 3, 31-21-15	15	1614
Cotton Valley Field—		
Humble Oil & Ref. Co.'s Merritt 1, 13-21-10	*¶40-20	2577
Haynesville Field—		
Ohio Oil Co.'s Taylor 1, 13-23-8	*	2830
Monroe Gas Field—		
Southern Carbon Co.'s Fee 27, 7-19-5e	¶20	2150
Edelen 3, 5-19-5e	¶5	2240
Total, 2 wells	¶25	

*Second completion after having been deepened.

Arkansas

Company, Well, Location	Initial Production Barrels	Depth
Stephens Field, Columbia County—		
Atlantic Oil Prod. Co.'s Murphy 1, 14-15-20	25	2114
Smackover Field, Ouachita County—		
Atlantic Oil Prod. Co.'s Brierton B-1, 25-15-17	35	2288
Brierton B-3, 25-15-17	40	2300
Burton Trust's Hughes 4, 28-15-16	85	2270
Clark et al's Berry 4, 24-15-17	60	2290
El Dorado Union Oil Co.'s Hughes 3, 28-15-16	140	2269
Hughes 5, 28-15-16	150	2270
Forrest Oil Co.'s Mullins 11, 27-15-16	50	2267
Mullins 12, 27-15-16	25	2267
Galloway et al's Hughes 1, 28-15-16	75	2250
Hughes 3, 28-15-16	180	2248
Gilliland Oil Co.'s Kyle 1, 29-15-16	60	2280
Kyle 2, 29-15-16	60	2280
Kyle 3, 29-15-16	40	2299
McRae A-3, 30-15-16	50	2274
Myar B-4, 30-15-16	100	2294
Solmson 4, 30-15-16	50	2265
Gulf Ref. Co.'s Meeks 4, 19-15-16	200	2305
Werner A-3, 36-15-17	15	2312
Holloway & Ellis's Shirey-Berg 2, 29-15-16	150	2284
Hurley et al's Shirley-Berg 1, 28-15-16	65	2300
Johnson et al's Hughes 2, 21-15-16	150	2288
Keene & Woolfe's Solmson 5, 32-15-16	125	2250
Klotch & Thomas's Peace 4, 26-15-17	60	2357
Simmons et al's Shirley-Berg 2, 29-15-16	200	2287
Smith Ref. Co.'s Fee 6, 30-15-16	100	2280
Standard Oil Co.'s Umstead 12, 33-15-15	30	1975
Sutton et al's Hughes 5, 28-15-16	60	2280
Hughes 6, 28-15-16	¶5-75	2315
The Texas Co.'s Chandler B-5, 30-15-16	75	2340
LaGrone 4, 30-15-16	100	2267
Wonder State Oil Co.'s Anderson 1, 23-15-17	100	2314
Smackover Field, Union County—		
Amerada Pet. Co.'s Flenniken 2, 6-16-15	¶35	2267
Clark et al's Smith 1, 16-16-15	200	2092
Dunn Oil Co.'s McKinney 2, 18-16-15	150	2050
Harrell & Umstead's Primm 1, 2-16-16	*	2320
Knox et al's Goff 1, 6-16-16	15	2262
Leggett et al's Goff 1, 6-16-16	15	2258
Magnolia Pet. Co.'s Neeley 2, 1-16-17	180	2259
Natural Gas & Pet. Co.'s Ballard 2, 15-16-15	¶40	2308
Pure Oil Co.'s Hicks 2, 20-16-15	50	2090
Meriweather 2, 6-16-15	¶30	2268
Ray Drilling Co.'s Tatum 3, 7-16-15	80	2030
Smitherman & McDonald's Holloway 4, 6-16-16	35	2265
Saxon A-4, 32-15-16	100	2255
Southerland et al's Ballard 1, 21-16-15	350	2038
Unity Oil Co.'s Alphin 1, 24-16-16	3500	2055
Total, 46 wells	¶120-7380	

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DEVIL'S STEEL HAND

Another spectacular success has been added to the record of the Devil's Steel Hand, with the handling of a very unusual and seemingly impossible fishing job for the White Oil Corporation, operating on the Edwards lease in the Bristow field.

In attempting to pull a packer from an old 6⅝ inch flowing well, the tubing had parted and the packer and 120 feet of tubing had been lost in the hole.

The first effort at fishing the job was with a 2 inch tubing spear and resulted in breaking the spear off and wedging it between the collar of the packer and the casing.

Other tools were tried without success and the job was two months old when our Tulsa Branch offered to take the job on a guarantee basis, to clean the hole or "no pay."

The offer was accepted and a 5 3/16 inch Devil's Steel Hand was placed on the job.

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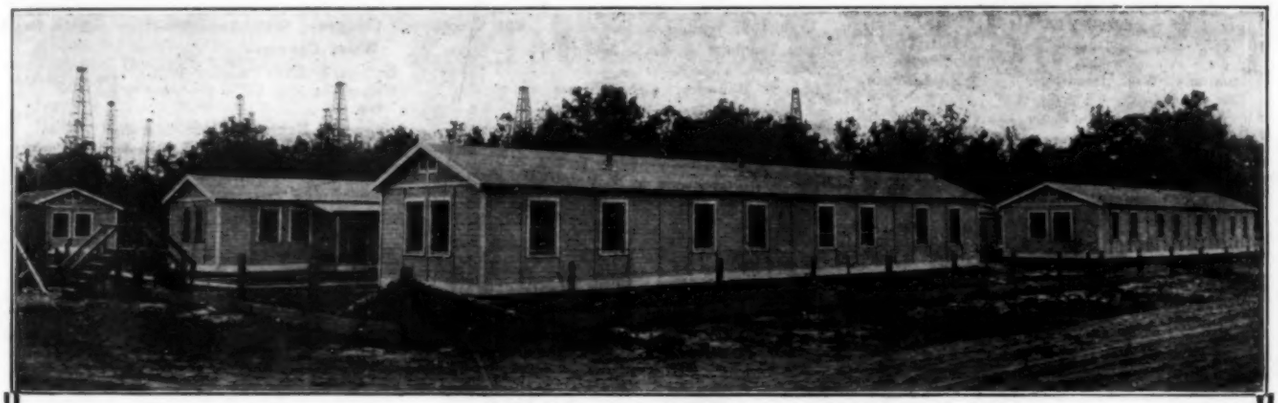

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Crain Ready-Cut House Co.

HOUSTON, TEXAS

Eastern States

PENNSYLVANIA

Company, Well, Location	Initial Production Bbls.	Depth
Clarion County—		
Alum Rock Gas Co.'s Riley 1	2	....
W. M. Garis heirs 1	3	....
Ridge Oil Co.'s J. C. Amsler 1	2	....
Greene County—		
Jackson Township O. & G. Co.'s B. Staggers 1	¶2	....

WEST VIRGINIA

Company, Well, Location	Initial Production Bbls.	Depth
Liberty O. & G. Co.'s A. W. Smith 3	¶2	....
Dave French & Co.'s Morton Cassidy 1	¶¼	....
Thos. Lambert & Co.'s Mary Lambert 1	¶5	....
Lucas & Mahoney's Clyde Flemming 1	5	....
Power Oil Co.'s Volcanic Tract 27	5	....
Haddox & Summers' L. T. Smith 1	*	....
Nester & Hardeman's I. P. Dye 1	¶2	....
Robert Elder & Co.'s A. N. Watson 1	¶2	....
Carnegie Nat. Gas Co.'s Amon Burt 1	¶2	....
Mason Oil Co.'s N. T. Mason 1	5	....
J. K. Hershey & Co.'s E. D. Jones 1	¶2	....
Butler & Sommerville's T. N. Watson 1	¶2	....
A. H. Smith's Helen C. Andrews 1	*	....
A. E. Moore's Winfred Woods 2	2	....
Wood County—		
Bowser & Ekas' Walter Willis 1	10	....
Henderson Oil Co.'s Caroline Wharton 20	*	....
Rogers & Rexroad's John Marshall 1	3	....
C. R. Mann & Co.'s O. E. Rexroad 2	*	....
Dan Kelley & Co.'s E. L. Nicholson 2	*	....
Doddridge County—		
Carter Oil Co.'s D. R. & L. M. Stout 3	¶2	....
Murphy O. & G. Co.'s Porter Maxwell 40	5	....
D. W. Gribble's J. P. Burr 1	*	....
Trainer Bros.' Maxwell heirs 1	*	2910
Hope Nat. Gas Co.'s B. F. Freeman 1	*	2785
Lincoln County—		
H. P. Moore's H. F. Johnson 1	¶2	....
Pridmore & Co.'s E. M. Hager 2	¶2½	....
C. C. Wolfe's G. A. Adkins 2	¶2	....
Roy & McComas' E. J. Cumming 1	¶2	....
Oliver Adkins 3	¶2	....
Roane County—		
United Fuel Gas Co.'s Looney-Rader 1	¶3	....
Ohio Fuel Oil Co.'s Sarah Craig 1	¶3	....
Heck Oil Co.'s C. F. Davis 3	50	....
Kanawha County—		
United Fuel Gas Co.'s Fred Huffman 1	¶2½	....
Morley Oil Co.'s L. V. Koontz 1	¶2½	....
Gilmer County—		
Carneigie Nat. Gas Co.'s Roswell 1	¶2½	....
Leroy Oil Co.'s L. R. Moore 1	¶2½	....
Marion County—		
Owens Bottle Machine Co.'s J. K. Freeland 1	¶½	....
Carnegie Nat. Gas Co.'s M. J. Richardson 2	¶1	....
Cabell County—		
Aetna Oil & Gas Co.'s H. L. Morrison 1	¶¼	....
Duty O. & G. Co.'s J. McKinney 1	¶¼	....
Braxton County—		
West Va. Central Gas Co.'s W. L. Ellison 1	*	....
P. K. Oil & Gas Co.'s F. Stout 1	*	....
Monongalia County—		
J. W. Moorehead & Co.'s John N. Yost 1	5	....
Mason County—		
Ohio Fuel Oil Co.'s Wm. Roush 1	5	....
Putnam County—		
Dunbar Gas Co.'s W. L. Austin 3	¶3	....
Marshall County—		
Carnegie Nat. Gas Co.'s Levi Rush 1	¶2	....
Wetzel County—		
C. T. & M. R. Raw's Leonard Morgan 1	*	....
Tyler County—		
Carter Oil Co.'s J. D. Garrison 1	*	....

KENTUCKY

Company, Well, Location	Initial Production Bbls.	Depth
Lawrence-Johnson Counties—		
Union Gas & Oil Co.'s:		
Andrew Skaggs 13	75	812
Proctor Sparks 20	¶¼	802
Proctor Sparks 21	40	809
Proctor Sparks 22	40	810
D. H. Ferguson 4	20	815
William Lester 4	20	807
J. J. Gambill 30	25	807
Allen County—		
Ogle & Rehm's Grubbs 13	18	283
Borah & House's W. Holder 3	10	205
Kiser & Co.'s Ayres 13	*	420
J. J. Wahl's L. S. Barlow 6	*	274
Parcelle & Co.'s Keen 17	*	320
Unknown, Sam Weaver 3	3	356
Warren County—		
J. B. Fetty's Covington 5	90	525
G. C. Foster & Co.'s C. E. Francis 4	20	1107
Ohio Fuel Oil Co.'s Edward Garrett 6	12	1115
J. T. Williams' Hawthorn 2	12	478
Herschel & Co.'s Peter Foster 4	*	450
Cumberland County—		
W. S. Raydure's Mrs. Coop 2	70	680

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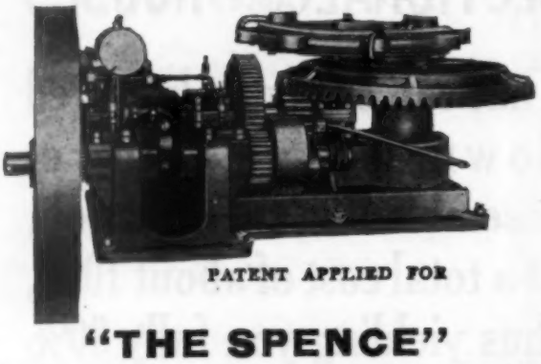

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PARKERSBURG, W. Va.

Company, Well, Location—	Initial Production Bbls.	Depth
Young Oil Co.'s J. Short 1	*	700
Kanawha Oil Co.'s Williams 2	*	1570
Lee County—		
Hupp & Duff's Mays 1	50	....
Huntington Oil Synd.'s Huntington 2	12	....
Pyramid Oil Co.'s T. B. Venerable 1	*	....
Owsley County—		
Petroleum Exploration Co.'s:		
Mose Price 1	¶1½	....
Harve Price 3	¶¼	....
Harve Price 4	¶1½	....
Johnson-Magoffin Counties—		
Petroleum Exploration Co.'s W. S. Adams 22	5	....
New Domain Oil & Gas Co.'s J. H. Gardner 6	4	....
Morgan County—		
Petroleum Exploration Co.'s Elizabeth Amyx 1	¶½	....
Wayne County—		
Head, Brown & Co.'s James Simpson 1	*	....
Monroe County—		
Stumn & Stumbo's Dickerson 1	*	60
TENNESSEE		
Clay County—		
Neely's Creek Oil Co.'s Spear 1	5	435
McFarland & Co.'s W. T. Windle 1	*	....
Union Oil Trust's Kyle 2	*	400
SOUTHEASTERN OHIO		
Washington County—		
O. D. Jones' Carrie Bartelle 10	5	....
W. A. Dauber & Co.'s G. W. Merron 2	2	....
O. O. Kinsey & Co.'s Elmer Hesson 1	5	....
S. A. Taylor & Co.'s J. Rodenbach 4	2	....
Noble County—		
Felix Gerst & Co.'s A. C. Neisant 8	*	....
C. M. Eichorn & Co.'s J. Huffman 4	*	....
Monroe County—		
Calebaugh & Co.'s G. D. Briggs 4	*	....
CENTRAL OHIO		
Licking County—		
Midland Oil Co.'s Frank L. Orr 1	102	3094
Carter Oil Co.'s A. & J. Settles 1	80	....
Wehrle Stove Co.'s Chas Ice 1	5	....
Clem R. Fetty 5	5	....
Ohio Fuel Gas Co.'s L. S. Lake 2	5	....
Wayne County—		
Ohio Fuel Gas Co.'s J. T. Bowers 1	85	....
James Hess 1	75	....
Logan Gas Co.'s J. W. Scholl 1	¶2	....
Brinkerhoff & Co.'s M. M. Hemming 1	12	....
East Ohio Gas Co.'s A. E. Stepfield 1	*	....
Holmes County—		
Central Ohio Gas Co.'s:		
Elva R. Martin 1	30	....
James Johnson 1	¶1	....
Jackson County—		
Ohio Fuel Supply Co.'s J. A. Harper 1	¶2	....
Ohio Fuel Gas Co. Steve Tripp 3	*	....
Medina County—		
Burton, Morgan & Co.'s A. W. Nettleton 2	*	....
Harpster & Co.'s C. W. Anderson 1	*	....
Hocking County—		
Ohio Fuel Gas Co. W. A. Williams 4	¶½	....
Lorain County—		
East Ohio Gas Co.'s E. F. Schaffer 4	¶2	....
Knox County—		
Heisey Gas Co.'s C. C. Green 5	¶¼	....
Athens County—		
McBride & Co.'s C. F. Frost 1	¶½	....
NORTWESTERN OHIO		
Shelby County—		
Harmon, Lyons & Miller Broerman 1	50	1282
Paulding County—		
U. S. A. Oil Co.'s King 1	50	1440
ILLINOIS		
Wabash County—		
Irwin & Co.'s E. K. Adams 1	*	1800

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Permits Granted and Locations for New Wells

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KANSAS

Barber County—B. B. Brown's Williams 1, southwest corner of the northwest of the northeast 13-30-15w.

Butler County—Liggett et al's Lucas 1, center of the east line of lot 25 6-27-8; Phillips Pet. Co.'s Brenjkofe 1, northeast corner of the northwest of 8-23-5.

Cowley County—Chas. Christie's Ward 1, southeast corner of the southeast 34-30-6; Connell Oil Co.'s Bunyon 1, southeast corner of the northwest 18-30-6. Lewis Oil Co.'s Robbins 1, southeast corner of the southwest 31-30-6.

Elk County—Ritchie & Moore's Packard 1, southwest corner of the northwest of the southeast 19-30-9.

Greenwood County—A. J. Fisher's Hollis 1, southwest corner of the northwest of the northwest 17-23-10. Rodgers et al's Cartwright 1, northeast corner of the northwest 6-24-10.

Osage County—Shade-Smith & Page's Unknown 1, southeast corner of the southwest of the southwest 16-18-17.

Russell County—Merriam et al's Murphy 1, southwest corner 11-12-12w. Lewis Oil Co.'s Haise 1, southeast corner of the northwest 31-12-14w. Alcorn Oil Co.'s Sellers 1, southwest corner 36-15-13w.

Summer County—Phillips Pet. Co.'s Felt 1, northwest corner 8-33-3w. Shawyer & Sutter's Haynes 1, southwest corner of the southeast 34-34-1w.

LOUISIANA

Bossier Parish—Square Deal Oil Synd.'s Hobbs 1, 18-18n-11w, 150 ft W and 150 S of NE cor of SE¼. Geo. W. Wetherbee's Fee B-7, 15-19n-11w, 667 ft E and 150 ft S of NW corner of SW¼.

Caddo Parish—G. F. Read's Hartzo 1, 7-21n-15w, 150 ft N and 150 ft E of SW corner NW¼ of SW¼.

Lincoln Parish—J. R. McCaldin's Hedgepeth 1, 28-20n-4w, 200 ft N and 117 ft W of SE corner of sec.

Ouachita Parish—La Del Oil Prop.'s Fee 25, 30-19n-5e, 660 ft N and 660 ft E of SW corner of sec. The Texas Co.'s Gibbs 5, 20-19n-5e, 1320 ft N and 660 ft W of SE corner of sec. United Oil & Natl Gas Prod. Co.'s Cole 1, 36-20n-4e, 660 ft S and 528 ft W of center of sec.

Red River Parish—G. M. Le Grand's Fee 3, 2-14n-12w, 100 ft W and 100 ft S of NE corner NW¼ of SE¼.

Union Parish—Danciger Oil & Ref. Co.'s Thompson 1, 16-20n-3e, 660 ft W and 660 ft S of NE corner of sec. Johnson & Waller's Pryor 1, 35-22n-2w, 2440 ft N and 1620 ft W of SE corner.

Webster Parish—Humble Oil & Ref. Co.'s Bodcau Lumber Co. 1, 14-21n-10w, 330 ft E and 2310 ft N of SW corner of sec.

ARKANSAS

Ouachita County—Atlantic Oil Prod. Co.'s Breiton B-2, 25-15-17, 200 ft S and E of NWc N½NW¼NW¼. El Dorado Union Oil Co.'s Anderson 1, 19-15-16, 200 ft N and E of SWc SE¼ SW¼. Gilliland Oil Co.'s Kyle 7, 29-15-16, 860 ft N and 1320 ft E of SWc SW¼ NW¼; Patton 6, 31-15-16, 200 ft S and E of NWc NE¼ NE¼. Gulf Ref. Co.'s Fincher 5, 33-15-16, 200 ft S and E of NWc of Sec.; Patton A-3, 31-15-16, 1120 ft S and E of center of sec; Patton A-4, 1140 ft S and 200 ft E of center of sec; L. Werner A-4, 36-15-17, 200 ft S and 2440 ft W of NEc of sec. Leon et al's Berg 1, 4-16-15, 200 ft S and E of NWc NW¼ NE¼. Page et al's Alexander 1, 22-15-17, 200 ft N and E of SWc SE¼ SW¼. Sun Co.'s Patton 4, 31-15-16, 200 ft S and E of NWc NE¼ NW¼. The Texas Co.'s Snow 2, 30-15-16, 180 ft S and 120 ft W of NEc NW¼NW¼; Snow 3, 200 ft S and E of NWc NE¼ NW¼; Snow 4, 200 ft S and W of NEc NE¼ NW¼; Snow 5, 200 ft N and W of SEc NE¼ NW¼; Snow 6, 200 ft N and E of SWc NE¼ NW¼; Snow 7, 200 ft N and W SEc NW¼ NW¼; Snow 8, 200 ft N and E of SWc NW¼ NW¼. Wingfield et al's Smith 2, 36-15-17, 200 ft S and E of NWc N½ NE¼ SE¼. Wonder State Oil Co.'s Anderson 2, 23-15-17, 200 ft N and W of SEc of sec. Morgan Pride Synd.'s Green 1, 22-15-19, 300 ft N and W of SEc NE¼ SE¼.

Union County—Bond & Evans' Wilson 2, 19-16-15, 200 ft N and W of SEc S½ NE¼ NW¼. Braswell et al's Moore 1, 19-16-15, 200 ft S and W of NEc N½ NW¼ NW¼. Broderick & Calvert's Murphy B-4, 8-16-15, 150 ft N and E of SWc NE¼ SW¼ SW¼. Dean et al's Hayes 2, 21-16-15, 132 ft N and 565 ft W of SEc NW¼ SW¼. Federal Pet. Co.'s Scott 1, 19-16-15, 200 ft S and E of NWc SW¼ NE¼. Henderson et al's Smith 3, 18-**16-15, 200 ft N and W of SEc NW¼** SW¼. Imperial Oil Co.'s Smith 1, 29-17-14, 150 ft S and W of NEc SW¼ NW¼. Keene & Woolfe's Bradford 1, 7-16-15, 200 ft N and W of SEc NW¼ NW¼. La-Tex Drlg. Co.'s Hayes 2, 21-16-15, 400 ft S and 660 ft E of NWc SW¼ NW¼. Phillips Pet. Co.'s Giller 7, 11-16-15, 200 ft S and E of NWc SW¼ SW¼. Pure Oil Co.'s Dumas 2, 16-16-15, 200 ft S and E of NWc NW¼ SW¼; L. Hicks 3, 20-16-15, 200 ft N and W of SEc NW¼ SE¼. Sanford et al's Berry 3, 8-16-15, 200 ft N and W of SEc SE¼ NW¼. Speary & Johnson's Hayes 1, 21-16-15, 892 ft S and 95 ft W of NEc SW¼ NW¼. The Texas Co.'s Cook 3, 21-16-15, 200 ft N and W of SEc NW¼ NW¼; Cook 4, 200 ft N and E of SWc NW¼ NW¼.

TEXAS

Archer County—Texas Co.'s W. F. Parrish 15, S. P. Ry. No. 2 sur, 50 ft W of No. 10; 16, 50 ft W No. 12; C. L. Abercrombie 1, Club Ranch sur, center lot 15; R. E. Hardegree 1, W. J. Fort sur, blk 52, 500 ft to S and 150 ft to E line. Murchison & Fain's L. F. Wilson 1, Amer trib sur, blk 25, 150 ft to N and E line; J. R. Coody 1, Club Ranch sur, blk 154, 150 ft to S and W lines; J. F. Smith 1, blk 16, 150 ft to S and W lines. C. W. Boller's L. F. Wilson 26, SP Ry No. 10 sur, 450 ft to N and 660 ft to E line; 27, 650 ft S No. 13. Geo. L. Pace's J. H. White 3, Amer Trib sur, blk 34, 450 ft to W and 150 ft to S line; 2, 300 ft N No 1. Texhoma Oil & Ref. Co.'s Mrs. J. H. Carter 10, Amer Trib sur, sec 93, no plat. Swastika Oil Synd.'s N. D. Goldsmith 4, Anderson Pasture sur, blk 5, 150 ft to N and E lines. J. B. Wilson et al's Parish 3, SP Ry No. 2 sur, no plat. Atlantic Oil Prod. Co.'s L. F. Wilson 1, Amer Trib sur, blk 28, 150 ft to S and E lines. C. H. Verschoyle's L. F. Wilson 5, Amer Trib sur, sec 27, 300 ft S No. 4; 6, 150 ft to S and W lines. C. H. Clark's J. T. Richardson 5, G. P. Diggs sur, blk 14, 750 ft to N and 150 ft to E line. Empire Gas & Fuel Co.'s L. F. Wison B-9, Amer Trib sur, sec 13, 150 ft to E and 490 ft to S line; B-11, 340 ft E No. 7. Kentucky Oil Corp.'s L. F. Wilson B-5, Amer Trib sur, sec 23, 300 ft N No. 2. Hobbs, Chenault & Burleson's N. D. Goldsmith 7, G. P. Diggs sur, blk 5, 385 ft W No. 8. W. S. Langford's Kemp & Kempner 8, W. V. F. L. sur, blk 42, 150 ft to N and 750 ft to E line. Atlantic Oil Prod. Co.'s W. E. Parrish 1, H&TC Ry sur, blk 26, 150 ft to N and E lines. Shappell Oil Co.'s J. L. Jackson 9, D. C. S. L. 4 sur, 1081 ft to N and 150 ft to E lines. Shamrock Oil Co.'s J. T. Richardson 6, J. L. Anderson sur, 150 ft to S and W lines. Oil Investment Co.'s A. D. Thomson 1, Amer Trib sur, blk 21, 150 ft to N and E lines. Sixty-Six Oil Co.'s L. F. Wilson 3, Amer Trib sur, blk 29, 150 ft to S and W lines.

Callahan County—Scharbauer & Hoad's Fisher 4, R. O. Boyle sur, blk 8, 225 ft to E and 725 ft to S line. J. M. Slade & Son's W. R. Jackson 3, D&D Asy sur, sec 3, 300 ft N No. 1. Warren & Hayes S. M. Eubanks 11, TE&L Ry No. 2278 sur, 150 ft to S and E lines. Sirmans Oil Co.'s S. M. Eubanks 9, TE&L Ry No. 2279 sur, 150 ft N No. 2. Kuhlemein & Klemer Bros' W. E. Pruitt 3, TE&L No. 2278 sur, 877 ft to W and 450 ft to N line. J. W. Keyes L. H. Qualls 11, TE&L No. 2287 sur, 450 ft to E and 150 ft to N line. Frank Nickel's M. Burnham's 1, TE&L Ry No. 2288 sur, 750 ft to S and 150 ft to W line. Ben Turgeon's Mrs. L. J. James 2, Bayland Asy sur, sec 60.20, 50 ft to N and 200 ft to W line. Wittmer Property Trustees' Mrs. R. D. Williams 5, T&P Ry sur, sec 1, 325 ft N No. 4. Parkersburg Drilling Co.'s L. H. Qualls 10, TE&L Ry No. 2279 sur, 100 ft to E and 150 ft to N line; Mrs. W. E. Pruitt 9, No. 2278, 600 ft to W and 150 ft to S line. J. M. Slade & Son's W. R. Jackson 3, D&D Asy sur, sec 3, 300 ft N No. 1.

Clay County—E. C. Dyarmett's O. Bullington 1, Pratt land sur, blk 16, 150 ft to N and E lines.

Caldwell County—United North & South Oil Co.'s A. Mercer 6, N. Reaville sur, 640 ft E No. 3; 7, 600 ft E No. 4; M. Mercer 7, M. G. Dykes sur, 439 ft S No. 3; W. F. Mercer 6, N. Reaville sur, 600 ft N No. 4; H. S. Trammerl 3, N. Reaville sur, 900 ft S No. 1; 4, 300 ft S No. 1; G. W. Proctor 7, Jno. Henry sur, 300 ft W No. 1; R. Rios 10, 330 ft W No. 6; Lee Byrd 4, Henry & Dykes sur, 900 ft to E and 50 ft to N line.

Coleman County — Tidal Oil Co.'s J. W. Gates 1, S. Crooks sur, 450 ft to W and 150 ft to S lines.

Eastland County—Junior Oil Co.'s B. W. Webb 4, M. L. Smith sur, no plat.

Guadalupe County—United North & South Oil Co.'s L. Marines 3, H. Cottle sur, 300 ft E No. 2; 6, 600 ft W No. 2; 7, 600 ft W No. 6; 9, 600 ft W No. 8; 16, 600 ft W No. 15. J. K. Hughes Dev. Co.'s J. E. Allen 11, H. Cottle sur, 150 ft to S and W lines; 13, 300 ft S No. 2; 14, 300 ft S No. 13. J. Dancinger's McKean Bros. 2, H. Cottle sur, 150 ft to N and W lines.

Grimes County—Carlos Dome Synd.'s J. E. Cuthrell's 21, B. O'Conner sur, 625 vs. to W. and 282 vs. to N lines.

Gray County—H. F. Wilcox's P. A. Worley 1, I&GN Ry sur, sec 62, 330 ft to S and E lines.

Harris County—Sun Oil Co.'s Bartlett Oil Co. 13, A. Smith sur, N of No. 11. J. D. Butler's Bailey 22, Jas. Strange sur, no plat. Gulf Prod. Co.'s A. Smith 19, Wm Scott sur, 153 ft to N and 109 ft to E line; Hoffman-Gaillard 14, 110 ft to N and 42 ft to E line. Humble Oil & Ref. Co.'s Simms-Smith 56, Wm. Scott sur, 302 ft N No. 33. Galena-Signal Oil Co.'s Atlantic & Gulf Pet. Co. 40, J. B. Stevenson sur, East of No. 5. Cezeaux & Martin's J. Hirsch, J. B. Jones sur, 450 ft to S and 250 ft to E line. Dome Dev. & Pet. Co.'s L. D. Chachere 1, J. D. Tayler sur, blk 32, South Central.

Hardin County—Gulf Prod. Co.'s Wing 157, Jno. Knight sur, 200 ft E No. 155; 156, 400 ft to N and 50 ft to E lines.

Jefferson County—Gulf Prod. Co.'s Gladys City 203, A Veatch sur, blk 41, 49 ft to W and 60 ft to S line. Baker Oil Co.'s Trembly No. 410, Jno. Veatch sur, 50 ft to S and E lines. Sun Oil Co.'s Fee 48, J. A. Veatch sur, S of No. 2.

Liberty County—Houston Prod. Co.'s H. Taylor 1, J. Devore sur, no plat. Progress Oil Co.'s Inc. H. C. Hanziger, Wm. Dundan sur, 100 ft to N and W lines. Thompson & Young's Miller 4, J. Devore sur, 75 ft to S and 44 ft to W line.

Limestone County—Tidal Oil Co.'s N. E. Mills 1, P. Varela No. 11 sur, no plat; 2; 3.

Milam County—J. W. Taylor's J. E. Doffield 1, J. Acosta sur, no plat. Texas Pet. Dev. Co.'s C. F. Niehaus 1, C. F. Niehaus sur, 300 ft S No. 4. Noark Oil Co.'s T. Phillips 1,

T. J. Chambers sur, 600 ft to S and 200 ft to E line.

McMullen County—Allen Oil Co.'s J. Stitz 3, Jas. Garner sur, blk 74, 180 ft to W and 225 ft to S line.

Mitchell County—Tidal Oil Co.'s J. J. Handley 1, T&P Ry sur, sec 1, 330 ft to N and W lines.

Navarro County—H. H. Cross Co.'s W. C. Humphries 2, Jas. Smith sur, sec 7, 150 ft to S and W lines; 3, 150 ft to N and E lines. Mills Bennett's K. Wolens, Smith & Greer sur, 100 ft to W and 150 ft to S line; 8, 100 ft to W and 750 ft to S line; 9, 350 ft to N and 100 ft to W line; 10, 50 ft to N and 122 ft to E line. Jno Hooser's Hill Bros. B-2, Jas. Smith sur, no plat. Witherspoon Oil Co.'s J. B. Bush 1, Jas. Smith sur, 150 ft to S and E lines. Derby Oil Co.'s H. B. Harvard 4, Mathews sur, E of No. 2. A. M. McIntyre's M. M. Alexander 1, Jas Smith sur, 150 ft to S and E lines.

Orange County—Gulf Prod. Co.'s W. Winfree A-3, Wm. Dyson sur, 50 ft to S and E lines.

Palo Pinto County—Jack Dalton Oil Co.'s R. S. Dalton 6, TE&L Ry No. 1789 sur, 1591 ft to W and 620 ft to N line.

Shackelford County—J. S. Dennis' Fee 7, Insane Asy sur, sec 15, 525 ft to N and 150 ft to W line. F. F. Pool et al's W. L. English 1, Univ. Lands sur, sec 18, 150 ft to W and 450 ft to S line. Corona Pet. Co.'s J. H. Jenkins 11, Insane Asy sur, sec 69, no plat. L. B. Tannerhill's R. J. Moberly 4, T&P Ry sur, sec 11, 2000 ft to N and 750 ft to E line. Montgomery & Montgomery's A. E. Morris 5, Insane Asy sur, sec 70, 300 ft N No. 1. F. A. Lain's L. M. Griffith 1, Insane Asy sur, sec 37, 500 ft to S and E lines.

Stephens County—Ivan Pet. Co.'s Fee 2, TE&L Ry sur, sec 1040, 642 ft to E and 975 ft to S line. Texas Co.'s G. W. Keathley 9, T&P Ry sur, sec, 25, 2346 ft to E and 330 ft to N line; J. W. Parks A-39, TE&L Ry No. 3371 sur, 2180 ft to E and 1490 ft to N line. Gulf Prod. Co.'s J. H. Rollins 8, T&P Ry sur, sec 54, 1235 ft to E and 627 ft to S line. States Oil Corp.'s W. G. Williamson 1, T&P Ry sur, sec 86, 250 ft to S and W lines. N. A. Moore et al's C. J. Williams 1, T&P Ry sur, 330 ft to S and E lines; R. O. Lee 1, 675 ft to E and 350 ft to S line.

Wichita County—A. D. Robinson's J. E. Roller Est. 10, W. A. Grady sur, 100 ft E No. 1. Britain and Pois' Kemp & Allen 2, R. R. V. L. sur, blk 26, 150 ft to S and W lines. Lee Wilson's W. W. Overby 2, H. B. Balch sur, 300 ft E No. 1. Phillips, Yates & Michna's S. B. Burnett Est. C-1, HT&B Ry sur, sec 2, 150 ft to N and W lines. Texhoma Oil & Ref. Co.'s W. T. Waggoner A-30, H& TC Ry sur, sec 34, no plat. Eureka Prod. Co.'s W. T. Waggoner 9, H&TC Ry sur, sec 148, 850 ft to E and 725 ft to S line. F. C. Baldwin et al's J. W. Kennedy 20, GC&SF Ry No. 6 sur, 300 ft S No. 5. Gulf Prod. Co.'s J. D. Melton A-6, GC&SF Ry No. 2 sur, 500 ft to N and 450 to W line. Crisson Oil Producer's W. W. Overby 3, blk 128, 375 ft to W and 375 ft to N line, Lou Ellen Oil Co.'s Kemp & Kempner, W. G. Burton sur, 450 ft E No. 3. Roy I. Carter's Kemp & Kempner 4, J. M. Tigert sur, blk 53, 410 ft N No. 2. Fisher & Reese's Rexford 1, D. Mathews sur, blk 10, 450 ft to W and 150 ft to S line. Gambill, Chauncey, Pace & Muse's Dr. E. M. Hughes 1, D. C. S. L. No. 3 sur, 750 ft to S and 450 ft to E line. Bonchil Co.'s H. Beach 18, C. T. Ry No. 4 sur, 300 ft SW No. 6. W. J. Sheldon's Fee 2, GC&SF Ry No. 6 sur, 150 ft to S and E lines. V. M. Clapton et al's T. L. Art et al 1, M. Ramsey sur, blk 1, 150 ft to N and W lines. Underwood Drilling Co.'s Murray 1, H. B. Balch sur, sec 12, 150 ft to S and E lines. AnnieL. Witcher's Saunders Est. 12, Ward & Todd sur, blk 2, 600 ft to S and 320 ft to E line. Strauss & Allen's W. V. F. L. sur, blk 7, 300 ft to N and E lines; 3, blk 10, 150 ft to S and E lines. Trinity Prod. Co.'s Burnett 13, HT&B Ry sur, sec 7, 342 ft W No. 2. D. M. Ross' S. Mitchell 10, P. Castleman sur, 750 ft to W and 150 ft to S line.

Wilbarger County—I. G. Shouers' Fee 1, H&TC Ry sur, sec 23, 365 ft to E and 150 ft to S line.

Webb County—Black Panther Pet. Co.'s E. Garcia 8.607 sur, 450 ft to E and 150 ft to N line. F. H. Wickett's Breckenridge 1, 460 sur, blk 13, 150 ft to N and E lines; 1, blk 12, 450 ft to E and 150 ft to S lines; 2, 150 ft to S and E lines; 4, 150 ft N No. 2; 5, 150 N No. 4; 6, 150 ft to N and E lines; 7, 150 ft to S and W lines.

Van Zandt County—Jenkins & Brookins' R. P. Hughes 1, E. Alvardo sur, 660 ft to N and E lines.

Young County—Union Oil Co.'s of Nevada B. M. Keathley 1, TE&L Ry sur, blk 153, 933 ft to E and 172 ft to S line. Empire Gas & Fuel Co.'s R. M. Williams 1, R. O. Woolford sur, 300 ft to N and E lines. Westervelt & Noble's M. K. Graham 7, Jas Bolton sur.

OKLAHOMA

Carter County—Amerada Petroleum Co.'s Gardner 2, center of the south half of the northwest of the northeast of 20-5s-1e; Lathrop et al's No. 1, center of the northwest of the southeast of the northeast of 28-1s-8w,; Magnolia Petroleum Co.'s Johnson 1, center of the southeast of the southeast of the northeast of 32-1s-3w. Continental Supply Co.'s Yore 3, northeast corner of the southwest of 18-2s2w; old well cleaning out to deepen. Cotton Belt Petroleum Co.'s Sparks 7, center of the southwest of the southeast of the southwest of 30-2s-2w; Cottonbelt Rexroat 5-C, center of the northeast of the northwest of the southwest of 10-4s2w. Magnolia Petroleum Co.'s Cruce 18, located 50 feet north of No. 10, northeast quarter of 16-4s-2w.

Creek County—Prairie Oil & Gas Co.'s Kernal 5. northeast corner of the southeast of 30-14-8. Eastern Oil Co.'s Roberts 1, northwest corner of the southeast of the northeast of 17-15-8. Cumberland Oil Co.'s Snyder 1, northwest corner of the northeast of the northwest of 27-15-10. Gypsy Oil Co.'s 2, northwest corner of the northeast of 22-16-8. Loraine Pet. Co.'s Deer 12, northwest corner of the southwest of the northwest of the northeast of 23-16-8. Nowata Oil & Ref. Co.'s 4, northwest corner of the northeast of the southwest of 16-16-9. Transcontinental Oil Co.'s Stidham 2, center of the north half of the northwest of the south east of 21-17-8. Cosby et al's Richard 1, northeast corner of the southeast of the northwest of the southwest of 25-15-7. C. G. Tibbens 1, northwest corner of 18-14-9. Phillips Petroleum Co.'s 1, southeast corner of the northwest of 24-14-9. Hartman & Williams 1-A, northwest corner of the southwest of 35-16-10. Howarth et al's 1, northeast corner of the southwest of 11-17-10. Ireland et al's Cooper 1, center of the south line of the southwest of the northwest of 17-17-11.

Garvin County—Edna Consolidated Oil Co.'s 1, center of the southeast of the southeast of the northwest of 21-4n-1w.

Seminole County—Independent Oil & Gas and Sinclair Oil & Gas Co.s' Grayson 1, center of the northeast of the southeast of the southeast of 32-8-8. Roxana Pet. Co.'s 1, center of the southeast of the southwest of the southwest of 10-10-8; 2, same lease, center of the southwest ten acres of 10-10-8. Mid-Kansas Oil & Gas Co.'s Alexander 3, center of the northwest of the northwest of the northwest of 15-10-8; 1, same farm, center of the northeast of the northwest of the northwest of 15-10-8. Wilcox Oil & Gas Co.'s Bruner 5, center of the northwest of the southwest of the southwest of 15-10-8. J. I. Cromwell's Roberts 2, center of the northeast ten acres of 16-10-8. Gilliland & Livingston's 1, center of the northeast of the northwest of the northeast of 16-10-8. Tidal Osage Oil Co.'s Harjo 2, northeast corner of the southeast of the northeast of 21-10-8; 3, same lease, southeast corner of the northeast of the northeast of 21-10-8; 4, same lease, northeast corner of 21-10-8. Shaffer Oil & Ref. Co.'s Yahola 3, northwest corner of 22-10-8.

Okfuskee County—Brock et al's Fisher 2, northeast corner of the southeast of the northeast of 1-12-11. North Baltimore Oil & Gas Co.'s Sugar 6, center of the west line of the southeast of the northeast of 13-12-11. Independent Oil & Gas Co.'s 1, center of the southwest of the southeast of the southeast of 18-10-9.

Hughes County—Papoose Oil Co.'s Alexander 4, center of the northeast of the northeast of the southeast of 4-9-9. Roxana Pet. Co.'s 1, center of the northeast of the northeast of the southwest of 17-9-9. Mid Kansas Oil & Gas Co.'s 3, northeast corner of the southwest of the northeast og 9-9-11; 4, same farm, northeast corner of the southeast of the northeast of 9-9-11.

Okmulgee County—Galbreath et al's Hensley 1, southwest corner of the northwest of the northwest of the southeast of 24-13-12. C. F. Noble's 1, southwest corner of the northwest of 20-15-12. Shelton & Bassett's Munnell 2, northeast corner of the southeast of 28-15-13. Independent Oil & Gas Co., 6, center of the east line of the northwest of the northwest of 27-16-12.

Pawnee County—Marland Ref. Co.'s Knishel 1, southwest corner of 27-21-3e.

Tulsa County—Vick Oil Co.'s 3, northwest corner of the northeast of 16-18-13. Gladys Belle Oil Co.'s 1-A, northwest corner of the southwest of the northeast of the northwest of 29-19-12.

Major County—Bradstreet's Ratcliff 1, center of the southwest of 9-22-9w.

Noble County—Healdton Oil & Gas Co.'s Rence 13-B, northeast corner of the southwest of the northeast of the northwest of 11-24-1w.

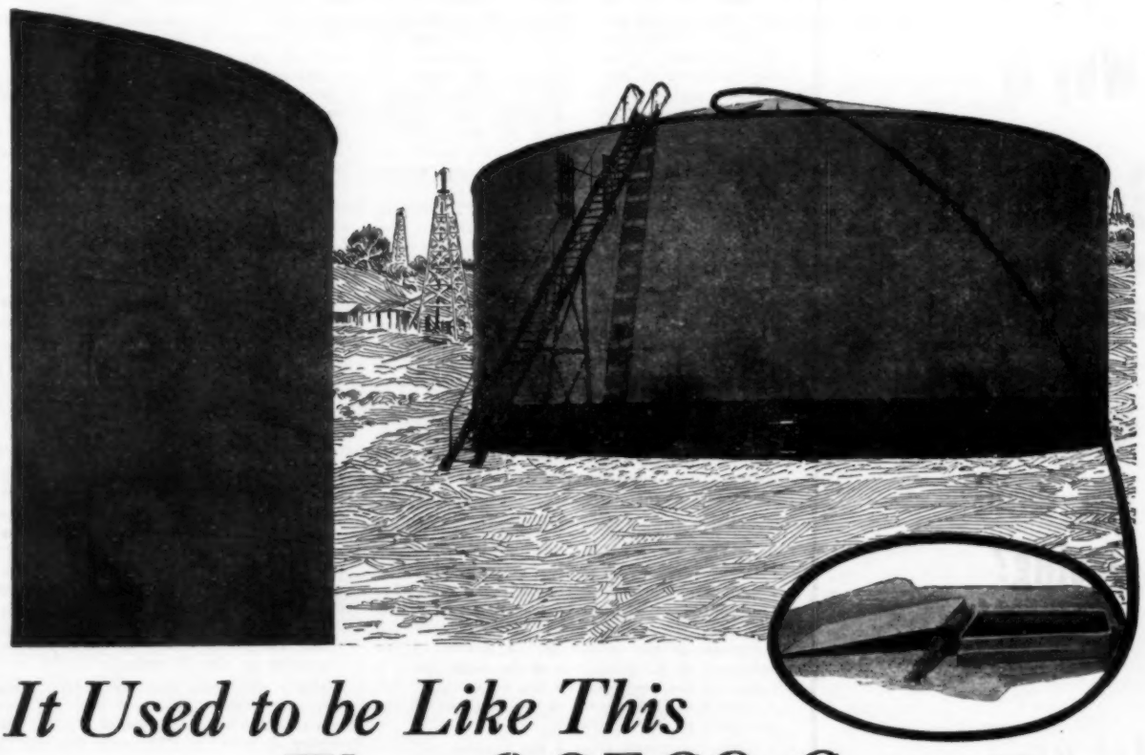
Kay County—Monahan et al's Barr 3, northwest corner of the southeast of the northeast of 16-27-1w. Ostot Dev. Co.'s Barr 2, southwest corner of the northeast of the northeast of 16-27-1w. Alwin Oil Co.'s Robinson 1, southeast corner of 17-27-1w. Otstot Dev. Co.'s Shrimp 1, northeast corner of the northwest of 20-29-1e.

Stephens County—Magnolia Petroleum Co.'s Toney 1, southwest corner of 15-2s-7w; Magnolia Wilson 8, southwest corner of the northwest of the northeast of the southeast of 17-2s-7w, skidding rig from No. 7.

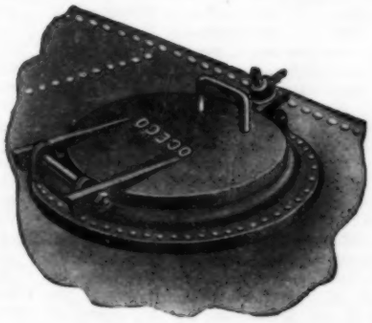
Beckham County—Foster Dev. Co.'s Marshall 2, northwest corner of the southwest of the northwest of 32-9n-23w.

Wagoner County—Du Carter et al's 2, southeast corner of the southwest of the northwest of 11-17-16. Livingston Oil Corp.'s 2, northeast corner of the southwest of the southwest of 11-17-16. Cowman et al's 1, center of the north line of the southwest of the northwest of 15-17-16. Harper & Briscoe's 3, center of the east line of the southwest of the northwest of 16-17-16. Sewell Pet. Co.'s 1, northeast corner of the southeast of 31-17-16; Jacobs 1, northwest corner of the southwest of 30-17-17.

Osage County—Phillips Petroleum made following locations: 1, center of the southwest ten acres of 11-27-5; 2, center of the southeast of the southwest of the southwest of 11-27-5; 3, center of the southwest of the southwest of the southwest of 11-27-5; 4, center of the southeast of the southeast of the southwest of 11-27-5; 5, center of the northwest of the southwest of the southwest of 11-27-5; 6, center of the northeast of the southwest of the southwest of 11-27-5; 7, center of the northwest of the southeast of the southwest of 11-27-5; 8, center of the northeast of the southeast of the southwest of 11-27-5; 9, center of the southeast of the northeast of the southwest of 11-27-5; 10, center of the southeast of the northwest of the southwest of 11-27-5; 11, center of the southwest of the northeast of the southwest of 11-27-5; 12, center of the southeast of the northeast of the southwest of 11-27-5; 13, center of the northwest of the northwest of the southwest of 11-27-5; 14, center of the northeast of the northwest of the southwest of 11-27-5; 15, center of the northwest of the northeast of the southwest of 11-27-5; and 16, center of the northeast of the northeast of the southwest of 11-27-5. Twin State Oil Co.'s located in sixteen wells on the southwest quarter of 18-27-6 as follows: Nos. 1, center of the southeast of the southeast of the southwest; 2, center of the



It Used to be Like This Then OCECO Came



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southwest of the southeast of the southwest; 3, center of the southeast of the southwest of the southwest; 4, center of the southwest ten acres; 5, center of the northwest of the southwest of the southwest; 6, center of the southwest of the northwest of the southwest; 7, center of the northwest of the northwest of the southwest; 8, center of the northeast of the northwest of the southwest; 9, center of the northwest of the northeast of the southwest; 10, center of the northeast of the northeast of the southwest; 11, center of the southeast of the northeast of the southwest; 12, center of the northeast of the southeast of the southwest; 13, center of the northwest of the southeast of the southwest; 14, center of the northeast of the southwest of the southwest; 15, center of the southwest of the northeast of the southwest; and 16, center of the southeast of the northwest of the southwest.

Midland-Delmar companies made their 16 locations on the southeast quarter of 3-27-5 as follows: Nos. 1, center of the southeast ten acres of the section; 2, center of the southwest of the southeast of the southeast; 3, center of the southeast of the southwest of the southeast; 4, center of the southwest of the southwest of the southeast; 5, center of the northwest of the southwest of the southeast; 6, center of the northeast of the southwest of the southeast; 7, center of the northwest of the southeast of the southeast; 8, center of the northeast of the southeast of the southeast; 9, center of the southeast of the northeast of the southeast; 10, center of the southwest of the northeast of the southeast; 11, center of the southeast of the northwest of the southeast; 12, center of the southwest of the northwest of the southeast; 13, center of the northwest of the northwest of the southeast; 14, center of the northeast of the northwest of the southeast; 15, center of the northwest of the northeast of the southeast and 16, center of the northeast of the northeast of the southeast.

Same companies located the various wells on the northwest quarter of 14-27-5 as follows: Nos. 1, center of the southeast of the southeast of the northwest; 2, center of the southwest of the southeast of the northwest; 3, center of the southwest of the southwest of the northwest; 4, center of the southwest of the southwest of the northwest; 5, center of the northwest of the southwest of the northwest; 6, center of the northeast of the southwest of the northwest; No. 7, center of the northwest of the southeast of the northwest; No. 8, center of the northeast of the southeast of the northwest; No. 9, center of the southeast of the northeast of the northwest; No. 10, center of the southwest of the northeast of the northwest; No. 11, center of the southeast of the northwest of the northwest; No. 12, center of the southwest of the northwest of the northwest; No. 13, center of the northwest ten acres; No. 14, center of the northeast of the northwest of the northwest; No. 15, center of the northwest of the northeast of the northwest, and No. 16, center of the northeast of the northeast of the northwest.

Skelly Oil Company located eight wells no the southwest quarter of 26-27-5, as follows: No. 1, center of the northeast of the northeast of the southwest; No. 2, center of the southeast of the northeast of the southwest; No. 3, center of the northeast of the southeast of the southwest; No. 4, center of the southeast of the southeast of the southwest; No. 5, center of the northwest of the northeast of the southwest; No. 6, center of the southwest of the northeast of the southwest; No. 7, center of the northwest of the southeast of the southwest, and No. 8, center of the southwest of the southeast of the southwest.

Skelly also located eight on the northwest quarter of 35-27-5, as follows: No. 1, center of the northeast of the northeast of the northwest; No. 2, center of the southeast of the northeast of the northwest; No. 3, center of the northeast of the southeast of the northwest; No. 4, center of the southeast of the southeast of the northwest; No. 5, center of the northwest of the northeast of the northwest; No. 6, center of the southwest of the northeast of the northwest; No. 7, center of the northwest of the southeast of the northwest and No. 8, center of the southwest of the southeast of the northwest.

Prairie Oil and Gas Company located 16 on the southwest quarter of 13-27-5, as follows: No. 1, center of the southeast of the southeast of the southwest; No. 2, center of the southwest of the southeast of the southwest; No. 3, center of the southeast of the southwest of the southwest; No. 4, center of the southwest ten acres; No. 5, center of the northwest of the southwest of the southwest; No. 6, center of the southwest of the northwest of the southwest; No. 7, center of the northwest of the northwest of the southwest; No. 8, center of the northeast of the northwest of the southwest; No. 9, center of the southwest of the southeast of the southwest; No. 10, center of the northeast of the northeast of the southwest; No. 11, center of the southeast of the northeast of the southwest; No. 12, center of the northeast of the southeast of the southwest; No. 13, center of the northwest of the southeast of the southwest; No. 14, center of the northeast of the southwest of the southwest; No. 15, center of the southeast of the northwest of the southwest, and No. 16, center of the southwest of the northeast of the southwest.

Mid-Kansas Oil and Gas Company located 7 wells in the northwest quarter of 26-27-5: No. 1, center of the northwest ten acres; No. 2, center of the northeast of the northwest of the northwest; No. 3, center of the northwest of the northeast of the northwest; No. 4, center of the northeast of the northeast of the northwest; No. 5, center of the southeast of the northeast of the northwest; No. 6, center of the northeast of the southeast of the northwest, and No. 7, center of the southeast of the southeast of the northwest.

Other new ones starting in the Osage are: Barnsdall Oil Company's No. 12, southwest quarter of 4-20-12; Barnsdall No. 25, northwest corner of 9-20-12; Oklahoma Natural Gas Co., No. 639, southwest corner of the northeast of the northwest of 28-20-12; Franchot & Moore No. 4, center of the west line of the northwest of 11-21-9; Markham & Breene No. 1, southeast corner of the northeast of the southeast of the northeast of 22-21-10; Barnsdall No. 16, southeast corner of 30-21-12; Gilliland Oil Co., No. 1, northeast quarter of 11-22-10 (old well deepening); Gilliland Oil Co., No. 3, northwest corner of the northeast of the northwest of 14-22-10 (old well deepening); Sand Springs Home No. 79, southwest corner of the northeast of the southeast of 35-22-8; Tidal Osage Oil Co. No. 19, center of the south line of the northeast of 32-22-10; No. 20, center of the southeast of the southwest of the northeast of 32-22-10; No. 21, same lease, center of the southeast of the southeast of the northeast of 32-22-10; Winona Oil Co. No. 17, northwest corner of the southwest of 32-22-10 (twin well); Tidal Osage Oil Co. No. 37, southwest of the northwest of 34-22-10 (twin well); Marland Refining Co., No. 12, center of the southeast of the northwest of the southeast of 20-23-8; No. 13, same lease, center of the northwest of the northwest of the southeast of 20-23-8; Red Bank Oil Co., No. 1, center of the southeast of the southeast of the southwest of 20-23-8; No. 2, same lease, southeast corner of the northeast of the southeast of the southwest of 20-23-8; No. 3, same property, center of the east line of the southwest of 20-23-8; A. E. Carleton No. 1, northwest corner of 28-23-8; Marland Refining Co., No. 2, center of the southwest of the northwest of the northeast of 29-23-8; No. 3, same lease, center of the northeast of the northwest of the northeast of 29-23-8; No. 4, same lease, center of the southeast of the northwest of the northeast of 29-23-8; No. 5, same property, northeast corner of the southwest of the northeast of the northwest of 29-23-8; Peters and others No. 12, southeast corner of the northeast of the southeast of the southwest of 4-23-9; Owen Osage Gas Co., No. 284, northwest corner of the southeast of the southwest of the northwest of 17-23-11; Tidal Osage Oil Co., No. 6, center of the south half of the north half of the northwest of 25-24-8; Mutual Oil Co., No. 4, center of the northeast of the northeast of the southeast of 32-24-8; Gypsy & Skelly No. 2, southwest corner of the

Tests Along Fault Believed Near Sand

Completions are expected before close of month—Wells on favorable locations

By H. H. King

Corsicana, Texas, April 7.—The first group of tests started recently on wildcat acreage in the Balcones-Mexia fault zone, extending in a northeast direction across the state from the Corsicana-Powell field, are drilling close to the level where the Woodbine sand pay is expected, and at least six tests on as many different favorable looking structures are due for completion before the close of the present month. Leasing activity continues on a large scale in a general direction from Hopkins County to Texarkana, while small tracts located in the vicinity of the fault region from Hopkins County to the Corsicana-Powell field are still very much in demand by companies and operators that were late in acquiring their protection acreage.

The Bazette community, located northeast of the Corsicana-Powell field in Navarro County and the Prairieville structure on the east edge of Kaufman County have been considered by many geologists as being among the most promising structures for oil production in the fault region, and four of the tests now drilling in these two areas are due for completion within the next 10 days. The test on the Prairieville structure is being drilled by Col. A. E. Humphreys of Mexia fame in the name of the Boyd Oil Company on the B. T. Rand farm, near the town of Prairieville, and the formations drilled so far by the test appear to be running somewhat low for production. The Pecan Gap chalk is reported to have been encountered at 1970 feet, while the top of the Austin chalk was logged at 2472 feet. Reports from the test late last week indicated that it was still drilling chalk at 2770 feet and will be carried to the contract depth. Leases and royalties on land surrounding this drilling block were in big demand and commanded unusually high prices.

Four Tests

Of the four tests drilling in the Bazette community, two are located southwest of the town of Bazette and supposedly in the vicinity of the main fault extending up from the Corsicana-Powell field. Cranfill Brothers and Penn's H. A. Barnett 1, H. S. Simonton survey, is now believed to be off structure, since the top of the Austin chalk was not obtained until a depth of 2824 feet had been reached, and reports from the test late last week credit it with continuing in chalk at 2970 feet. This test is located in the southwest corner of a large block of leases held by Col. Humphreys, and was drilled on the strength of a general belief that a producing structure would be found between dry holes drilled on the J. H. Millican and J. P. Harden surveys. The dry hole on the Millican survey is credited with an elevation of 367 feet and Austin chalk from 2161 to 2629 feet, while the dry hole in the northeast corner of the Harden survey had an elevation of 413 feet and Austin chalk from 2251 to 2564 feet, another nearby dry hole in the Harden survey logged the Austin chalk from 2238 to 2568 feet, with an elevation of 409 feet. This trio of old dry holes are about one and a quarter miles apart, and operators hoped to repeat Corsicana-Powell field's history by picking up the producing structure between two closely drilled dry holes. Less than one mile northeast of the Harden survey failures, a deep test is being drilled by Gilbert Johnson et al's L. Skiles 1, D. R. Mitchell survey, and late last week had reached a depth of 800 feet. This test and the one nearing completion on the Barnett lease will remove all question of doubt as to whether a producing structure lies immediately northeast and in the trend of production of the Corsicana-Powell field, and between the trio of dry holes.

East of Bazette

The two tests being drilled east of Bazette by the Boyd Oil Company and the Mutual Oil Company are supposedly located on minor faults, and are only about one mile apart. Mutual Oil Company's Mrs. C. W. Nowlin 1, T. B. Harding survey, picked up the Austin chalk formation last week at 2528 feet, and was still drilling in chalk at 2600 feet at last reports. Boyd Oil Company's Conner-Rutherford 1, R. D. Newman survey, is reported drilling ahead at 2215 feet without having encountered the Austin chalk. Peak prices were paid for close in leases around these two drilling tests, while Mutual and Boyd Oil Companies have a comparatively small drilling block.

The first failure to be recorded since wildcat activity has been renewed along the fault region in East Central Texas is credited to Hunt County, where Chas. Pettitt and Harlow Brothers' L. C. Cooper 1, Jas. Cole survey, was drilled to 3115 feet. This test is located between Campbell and Commerce and about one mile southwest of the Tri-City Oil Company's Ridley 1, McKinney & Williams survey, which had a slight show of oil and gas before being abandoned as dry hole at 3048 feet several years ago. Pettitt & Harlow Brothers' test logged the Austin chalk from 2060 to 2409 feet, and had a slight trace of gas in the Blossom sand at 2452 feet, while the Woodbine sand was reported at 2965 feet, but when cored deeper salt water was encountered.

Marland Drilling

The Marland Oil Company's J. T. Coopedge 1, N. Hamilton survey, in the southwest corner of Hopkins County, is drilling below 1900 feet, while the same company's test on the King 75 acre lease in N. G. Crittenden survey in the west edge of Rains County, is drilling below 300 feet. The large drilling block held by Marland in Van Zandt County and northeast of Wills Point is to be tested immediately, and a location has been made on the Ella Greer 75 acre lease in the lower part of the John Blair survey.

In Hopkins County, the Skelly Oil Company is moving in timbers to start a deep test on the J. M. McCowin farm, S. Tunnage survey, while in the same general section of the county, E. L. Smith Oil Company's Pippin 1, has about completed rigging up and will probably spud this week.

Wildcat acreage in Bowie County can still be obtained for from $1 to $2 per acre on five year leases with rentals ranging from 50 cents to $1 and leases are being taken by Marland Oil Company, Harrell & Harrell of Tulsa, Pure Oil Company, Gulf Production, Weimar et al, Prairie Oil and Gas Company, Sun Oil Company and a number of other concerns. Harrell & Harrell have leased a block of about 10,000 acres lying on both sides of Anderson Creek, and extending from four and one-half to eight miles southwest of the town of New Boston, and have announced that another test is to be drilled on their block of approximately 7500 acres near New Boston, after having completed a deep dry hole last year. Weimar et al have about 5000 acres leased near Hooks and a little south of the T. & P. railroad, and are taking additional leases for a deep test later on.

A. S. Henley, chief geologist of the Houston Oil Company of Texas, is on a trip to San Antonio.

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southeast of the southwest of the northeast of 32-24-9; Peters and others No. 11, northwest corner of the southwest of the northwest of the northwest of 34-24-10; Owen Osage Gas Co., No. 282, southwest corner of the northeast of the northeast of the southeast of 34-24-11; Test Log Oil Co., No. 1, southwest corner of the northwest of the southwest of the northeast of 31-25-9; Mutual Oil Co., No. 1, center of the south line of the north half of the south half of the northeast of 24-26-8; Owen Osage Gas Co., No. 286, southeast corner of the southwest of the southeast of 10-27-10; No. 285, same lease, center of the east half of the northeast of 36-28-10.

New Texas County Gets Oil Producer; Well Flowing by Heads at 1436 Feet

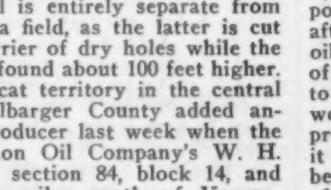
Wichita Falls, Texas, April 7.—Another county has been proven for oil production in the North Texas district as a result of the wildcat test drilled by Brit Cranfill and associates on the W. B. Mills land in the southeast corner of Baylor County flowing by small heads over the top of the casing late last week after bailing oil sand pay from 1432 to 1436 feet. This well is a rank wildcat, being located in the northeast corner of the south half of section 2413, and the nearest production lies about six miles due east in the Swastika section of Archer County. Additional storage is being set up at the well to place it on the pump. It is estimated good for about 150 barrels daily, and the production will be sold as fuel to other tests drilling in the southeast part of Baylor County.

Close in acreage around this wildcat producer was leased almost solid by concerns operating out of Wichita Falls, as the favorable showings made by a test drilled last year by Bob Waggoner on a nearby location on the W. H. Portwood ranch indicated that a producing structure existed in this section of Baylor County. The Portwood test logged an excellent looking oil sand from 1432 to 1435 feet, which is the same horizon that furnished production in the Cranfill well, but developed water trouble when a test of the sand was made, and was abandoned in December at 2003 feet. The structure proven for production by the Cranfill well is entirely separate from the Swastika field, as the latter is cut off by a barrier of dry holes while the sand pay is found about 100 feet higher.

Semi-wildcat territory in the central part of Wilbarger County added another oil producer last week when the South Vernon Oil Company's W. H. Stephens 2, section 84, block 14, and about eight miles south of Vernon, filled with oil after drilling sand pay from 948 to 964 feet. Preparations are being made to test the shallow pay on the pump. This company's first test was completed on the first of the year good for 75 barrels daily from sand at 1967-73 feet, while a third test is showing oil from a sand at 1295 feet.

Work is still progressing on the three deep wildcat tests in Clay County. The Nebraska-Texas Oil and Gas Company's W. H. Meyers 1, located in the northwest corner of the C. Thompson survey and about 12 miles south of Henrietta, is reported with about 500 feet of oil in the hole from broken sandy lime pay at 3337 to 3405 feet while waiting for a shot, and has been bailing oil for fuel. This test is almost sure to make a small pumper. Along the east edge of Clay County, Gulf Production Company's C. M. Worsham 3 is underreaming five and three-sixteenths inch casing to shut off cavings at 3475 feet, where the first shot was discharged, with a total depth of 3845 feet. This test is showing oil from gray lime pay below 3800 feet, and is to be given a shot before being drilled deeper. Gulf's wildcat test on the H. Boddy ranch, about six miles northeast of Henrietta, is underreaming five and three-sixteenths inch casing to shut off water to drill deeper. The present depth is reported at 3530 feet.

Gulf Production Company's wildcat test on the Nocona structure in the upper part of Montague County is reported to have encountered salt water after drilling through a good show of oil from sand pay to a total depth of 3485 feet. This test is to be carried to its contracted depth of 3500 feet this week and abandoned, unless another producing horizon is uncovered, while it is expected that another test will be drilled shortly on a different part of the structure.



Bulletin B-7

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THE BROWNELL CO., Dayton, Ohio, U. S. A.

Established 1855

East Central Texas Wildcats

HENDERSON COUNTY—Hodges et al's Cade Bros. 1, (Dorsey survey) bailed dry sand 3145 ft. Miller & Kimbro's Dobbs 1, sd 3205 ft. Mutual Security Oil Co.'s Browning 1, sd 3095 ft. Richardson Bros. et al's Cade Bros. 1, (Southerland survey) sd 300 ft.

HOPKINS COUNTY—Marland Oil Co.'s J. T. Coopedge 1, (N. Hamilton survey) dr 1920 ft. Skelly Oil Co.'s McCowin 1, lcn. E. L. Smith Oil Co.'s Pippins 1, rigging up. Kelsey et al's Brooks 1, dk. Schriver et al's Harmon-Russell 1, sd 1155 ft. John R. Lock et al's J. M. McGowan 1, (S. Tunnage survey) lcn.

HUNT COUNTY—Gulf Prod. Co.'s J. C. George 1, (E. Tidwell survey) lcn. Chas. Pettitt & Harlow Bros.' L. C. Cooper 1, (Jas. Cole survey) Austin chalk at 2060 fo 2409 ft, bailed Woodbine sand 2965 ft, dry 3115 ft; McDaniel 1, sd 925 ft.

KAUFMAN COUNTY—Boyd Oil Co.'s B. T. Rand 1, (J. R. Reierson survey) top chalk 2472 ft, dr in chalk 2770 ft. Marland Oil Co.'s J. O. Hamilton 1, (J. L. Montgomery survey) lcn. Judge J. A. Germany-Harty et al's W. S. Kirby 1, (S. Edens survey) dr 1600 ft. F. E. Skinner-Lyles et al's Barrow Bros. 1, (R. A. Terrell survey) dr 1600 ft. Kelsey et al's (was Roscoe et al) Watkins 1, trying to co 2850 ft.

FREESTONE COUNTY—Carter & Lytle's H. C. Hackney 1, tested salt water, td 3155 ft.

NAVARRO COUNTY — Boyd Oil Co.'s Rutherford-Conner 1, (R. D. Newman survey) dr 2215 ft. Cranfill Bros. & Penn's H. A. Barnett 1, (H. S. Simonton survey) top chalk 2824 ft, dr in chalk 2970 ft. Gilbert Johnson et al's Skiles 1, (D. R. Mitchell survey) dr 765 ft. Mutual Oil Co.'s Mrs. C. W. Nowlin 1, (T. B. Harding survey) top chalk 2528 ft, dr in chalk 2600 ft.

RAINS COUNTY—Marland Oil Co.'s King 1, (N. G. Crittenden survey) dr 300 ft. A. M. Yost et al's Margaret Tollett survey 1, rigging up.

VAN ZANDT COUNTY—Brookins & Jenkins et al's R. P. Hughes 1, (E. Alvarado survey) spudding. Marland Oil Co.'s Ella Greer 1, (John Blair survey) lcn. Terrell Oil Co.'s (Porter & Holmes) J. T. Dunbar 1, top chalk 2350 ft, dr in chalk 2560 ft. Van Zandt Oil & Gas Assn.'s Jones 1, (J. N. Holt survey) sd on top Pecan Gap 2153 ft.

WOOD COUNTY—Golden Oil Co.'s J. D. Adrian 3, (Hallmark survey) sd 1100 ft.

Central West Texas Wildcats

COMPLETIONS

Company, Well, Location	Initial Production Bbls.	Depth
Callahan County—		
C. O. Moore et al's H. P. Faulkner 2	*	2555
Poe, Wilson & Pennant Oil & Gas Co.'s W. B. Bryson 2	1950	2481
Root & Rhoades' Mrs. L. Cathey 1	*	1845
Mitchell County—		
The California Co.'s Earl Morrison 2-A	100	3035
A. L. Miller 2	100	3090
Palo Pinto County—		
H. L. Singleton et al's W. Holt 1	¶¼	4360

DRILLING REPORT

BROWN COUNTY — M. T. Anderson's Wheeler 1, rig. Brownwood Prod. & Ref. Co.'s Williams 8, rig. Brooks & Dozier's Byrd 1, machine. Canyon Oil & Gas Co.'s B. W. McDonough 2, showing considerable oil, dr 1314 ft. Joe Cullinan et al's G. W. Pickett 1, sd 1135 ft. Carlton-Tippett's O. B. Fomby 1, sd 1315 ft. Hart et al's Moore 1, dr 1140 ft. Infield Pet. Co.'s T. M. Windham 5, rigged up and sd. Leonard et al's Prather 2, sd 2370 ft. McMurry et al's Newton 1, spudding. Maher Bros.' Bohara 1, sd 2155 ft. Omaha Southern Oil Co.'s G. B. Gaines 2, sd 1690 ft.

CALLAHAN COUNTY—Burleson Oil Co.'s Isenhower 2, co with oil in hole, td 1770 ft.

Quaint Quality Quirks

Published When and Where the Spirit Moves, by

The Frick-Reid Supply Co.

Tulsa, Okla. Pittsburgh, Pa.

West of the Mississippi—Stores Everywhere

Quirk 8 April 12, 1924 Volume 1

IN EARLY Western days a man could get away with almost anything, but the few exceptions were well defined and the way of the transgressor was hard.

Old Doc Salvador is authority for the statement that at Lost Creek, Colorado, this epitaph adorns the tombstone of one erstwhile Mitchell Coots:

Here lies the clay of Mitchell Coots,
Whose feet yet occupy his boots.
His soul has gone—we know not where
It landed, neither do we care.
He slipped the joker up his sleeve
With vile intention to deceive,
And when detected, tried to jerk
His gun, but didn't get his work
In with sufficient swiftness, which
Explains the presence here of Mitch.
At Gabriel's trump, if he should wake,
He'll mighty likely try to take
The trump with that same joker he
Had sleeved to surreptitiously,
And which we placed upon his bier
When we concealed his body here.

To quote Glen Buck, "it is surely worth while to live in a day when honesty has come to be a recognized part of the law of self-preservation." For while punishment doesn't follow always as swiftly in the wake of the transgressor as in the case of Mitchell Coots, it comes as inevitably. In business is this particularly true.

Q Q Q

If you drive your car with one of the tires under-inflated, every revolution of the wheel causes the materials in the tire to bend and flex and rub together. The tire gets hot, and where there is sufficient friction to set up heat, there is sufficient friction to cause wear and depreciation.

The moment a drilling cable is unrolled and put into service, all the little fibres begin rubbing together. That is inevitable. It can no more be avoided than you can keep the wheels of your automobile from turning as you progress along the road.

But if your drilling cable happens to be Whitlock, the fibres rubbing together wear very slowly. Why? For the same reason that the wheels turning on your automobile axles wear but slowly. In either case lubrication keeps friction from degenerating into abrasion.

A special compound is used for lubricating Whitlock All-Manila Drilling Cables. It contributes greatly to their long life, particularly in climates where the tendency of drilling cables is to become dry and brittle.

Let us send you some booklets on Whitlock Cordage. You will find them very interesting.

Q Q Q

Ancient Egyptian manuscripts bear sculptural representations of rope making. They used flax, fibres of the date tree, and rawhide.

Herodotus states that the Persians made cables as large as 28 inches in circumference, of flax and papyrus, and used them in constructing the bridge of boats upon which the army of Xerxes crossed the Hellespont. Peruvians used fibres of the maguey for rope and twisted cables of sufficient strength to carry suspension bridges.

Here in America Sidney B. Whitlock founded the business which has since developed into the Whitlock Cordage Company. That was in 1825, about the time the first machines were invented for spinning threads from raw material. Today American machines are used extensively in Europe, and American Cordage is held in such high estimation that it is exported to all parts of the world.

Whitlock Cordage is carried in stock at all Frick-Reid Stores. It is guaranteed SUPERIOR to the United States Government Standards. More than one million pounds has been specified by the Navy Department on a single order.

Q Q Q

The other day a woman died in Kansas City. She had not yet reached middle age. Just a few years ago she was the highest salaried woman in that beautiful western city, with many interests and many friends.

She died for the same reason that a good automobile wears out quickly when it's driven too hard and too fast, with never any repairs or replacements. She was a broken machine.

Men break prematurely for the same reason. Business hours too long, nervous tension too high.

No business in the world calls for harder work or greater concentration or more courage than the oil business.

We know an oil man who takes two vacations every year, not because his business can spare him or because his organization runs more smoothly than other organizations, but because he is determined to give mind and body a square deal. He knows that nature doesn't make repairs and replacements when the human machine is going at high speed.

Q Q Q

Nothing relieves a man of more worry than real service on the part of his supply house. On drilling wells and pumping wells, give the Frick-Reid Store in your field a chance to strut its stuff.

In Oil Country Equipment—the most *human* Organization in America

Say you saw it in The Oil Weekly

Byron-Union Oil Co.'s Hennessey 1, sd 4045 ft. Chas. Dutton et al's Mrs. L. Cathey 3, co and swabbing oil, td 1779 ft; Harwell 1, rigging up. Dudley Oil & Gas Co.'s Hugh Moore 1, sd 1750 ft. Hickey et al's E. L. Findley 2, ur 2720 ft. Junior Oil Co.'s Surles 1, rig. C. O. Moore et al's Anderson 1, dr 1270 ft. Pennant Oil & Gas Co. et al's Webb-Albin 5, timbers. Seaboard Oil & Gas Co.'s Isenhower 1, dr 895 ft. Schaffner et al's James 2, dr 2320 ft. Shackelford et al's Chas. Allen 1, sd 1675 ft. John Sherrin's Mrs. L. Cathey 1, swabbing 35 bbls oil 1735-55 ft. Sherrin et al's L. Cathey 2, lcn. Tidal Oil Co.'s Mrs. Ella Cathey 1, timbers. Andy Urban's Clinton 1, ur 2105 ft.

COKE COUNTY—Ace Oil Co.'s W. C. Locke 1, spudded and sd. Mexia-Equitable Oil Oil Co.'s W. J. H. Hodges 1, sd 2505 ft.

COLEMAN COUNTY—W. A. Gray et al's Gray 1, sd 2485 ft. Patterson Oil Co.'s Fricks 1, sd 1005 ft. J. A. Robertson et al's Robertson 18, dr 1645 ft. Roth & Farroth's Overall 6, spudding. Sunflower Pet. Co.'s Gates 3, dr 1095 ft. Tidal Oil Co.'s W. G. Gates 1 and 2, lcns.

HOOD COUNTY—Corsicana Oil & Ref. Co.'s I. A. Rylee 1, dr in hard sand 3640 ft.

PALO PINTO COUNTY—Jack Dalton Oil Co.'s R. S. Dalton 5, fsh 830 ft. Fultz & Albright's McGee 1, dr 1365 ft. E. Hess et al's Crocker 1, trying to shut off water, td 3710 ft. Harris et al's Weldon 1, dr 3830 ft. Haubert et al's Porter 1, sd 305 ft. Lowe & Murray's Chenault 1, showing gas and oil 760 ft. Moore & Sneboldt's Pruitt 1, dr 3500 ft; Boles 2, showing gas 2165-85 ft, dr 2290 ft. S. W. Manning et al's R. Hitson 1, sd 3640 ft. Pender Prod. Co.'s L. C. Slemmons 1, sd 4135 ft. Phillips & Graham's J. A. Caudill 1, ur cas 3080 ft. Scott & McCluer's River Bed 1, sd 3712 ft. H. L. Singleton et al's W. Holt 1, completed as small gasser after shot 4360 ft. Skelly Oil Co.'s Carter 1, sd 2710 ft. Texas Pacific Coal & Oil Co.'s J. N. Stewart 145, fsh tools 1608 ft; Stewart 146, lcn; J. H. Robinson 8, fsh 1075 ft. Upham Gas Co.'s P. T. Dalton 1, to abn 680 ft; Dalton Estate 1-B, sd with hole full water 1675 ft; Fee land 1, dr 685 ft. R. A. Wheeler's Fee 1, dr 2945 ft. Youkan Oil & Gas Co.'s Seaman 1, sd 3965 ft.

BORDEN COUNTY—Kesselman Dev. Co.'s A. J. Long 1, rigged up and sd.

BREWSTER COUNTY—Arco Dev. Co.'s H. L. Kokernot 1, fsh cas 3765 ft. Brewster Oil Co.'s H. L. Kokernot 1, sd 2535 ft. Portland Oil Synd.'s State 1, sd 3040 ft. Nine Points Oil Co.'s Paralto & Finnell 1, sd 1570 ft. Marathon Oil Co.'s Nigger Creek 1, sd 2350 ft; Wilson 2, sd 4000 ft.

CONCHO COUNTY—Dome Prod. Co.'s Mrs. C. M. Hartgrove 1, dr 507 ft. Signal Oil Co.'s Sam Waring 1, pull casing to shoot pay at 2560 ft, td 3203 ft. Schultz Oil Co.'s W. O. Schultz 1, sd 3225 ft.

CRANE COUNTY—Texas Dev. Co.'s Jack Cowden 1, bldg rig.

CROCKETT COUNTY—Crockett Drilling Synd.'s J. M. Shannon 1, dr 2935 ft; Shannon 2, lcn; Robt. Massey 1, sd 535 ft. Bill Redman et al's (was Enders-Smith & Co.) University 1, sd 810 ft. W. E. Ball et al's J. S. Todd 1, lcn. Marathon Fold Drilling Club's L. P. Powell 1, dr 410 ft. Mid-Kansas & Transcontinental Oil Co.'s Harris Bros. 1, dr 2060 ft.

CULBERSON COUNTY—David Flood's McAlpin & Grisham 1, lcn. J. D. Wesner et al's Mack Sayles 1, sd 3105 ft.

DAWSON COUNTY—Lamesa Oil Co.'s John Burns 1, sd 2155 ft.

ECTOR COUNTY—Farmers Oil & Gas Co.'s Andy Newham 2, sd 1400 ft.

EL PASO COUNTY—Burns & Knight's Fee 1, sd 4170 ft.

FISHER COUNTY—Pyron Oil Co.'s J. A. McCall 1, sd 3125 ft.

GLASSCOCK COUNTY—Cushing Ranch Drilling Assn.'s W. H. Sparkman 1, sd 1950 ft. General Oil Co.'s L. S. McDowell 4, sd 3685 ft. Associated Ref. & Prod. Co.'s C. I. Brunson 1, sd 2935 ft.

HUDSPETH COUNTY—Wm. Loftus et al's Minnie Veal Slaughter 1, sd 1805 ft. Boole Oil Assn.'s Gardner et al 1, sd 1540 ft. Hueco Basin Oil Co.'s University 1, sd 2560 ft.

HOWARD COUNTY—Big Springs Prod. Co.'s Mable O. Quinn 1, sd 3640 ft.

KINNEY COUNTY—Havoline Oil Co.'s Weathersbee Ranch 1, fsh 3760 ft.

JONES COUNTY—Anson Oil & Dev. Co.'s C. B. Brown 1, sd 1855 ft. C-H Oil Dev. Co.'s J. A. Cullom 1, dr 3225 ft.

LOVING COUNTY—Ramsey Prod. Co.'s Russell 1, fsh 4485 ft; Russell 2, sd 810 ft.

MITCHELL COUNTY—California Co.'s W. H. Abrams (T&P) 5, showing oil, dr 3090 ft; W. H. Butler 1, dr 2400 ft; E. Morrison 1-A, cemented 5 3/16 casing 4490 ft; E. Morrison 5, running tubing after shot 3085 ft; L. C. LeSure 2, showing oil, dr 3070 ft. S. A. Sloan Oil Co.'s Sam Smart 3, dr 1315 ft; Smart 4, dr 720 ft; Smart 5, rigged up. J. F. Carey et al's Earl Morrison 1, dr up bailer after shot, td 3125 ft. Chal Daniel et al's W. D. Kynard 1, rigging up. M. E. Eddleman et al's A. C. Gist 1, bldg rig. Tidal Oil Co.'s Handley 1, lcn. Colorado-Texas Pet. Co.'s W. L. Foster 2, sd 2625 ft.

PECOS COUNTY—C. E. Menzie et al's Sherbino Bros. 1, lcn. Trans-Pecos Oil Co.'s H. L. Thomas 1, sd 475 ft; Bennett et al's 1, sd 1245 ft; Turney 1, sd 2610 ft; Johnson-Troy 1, sd 2965 ft. Southern States Lease & Prod. Co.'s J. M. Odem 1, sd 1205 ft. Oregon-Texas Oil Co.'s Turney 1, sd 3520 ft.

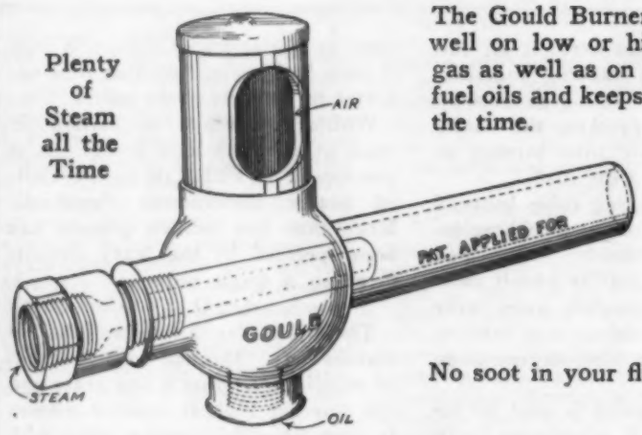
PRESIDIO COUNTY—Claude Byler's Tools Estate 1, sd 630 ft.

REAGAN COUNTY—Big Lake Oil Co.'s University 2, dd, dr in gray lime 3110 ft; University 4, dr 2670 ft; University 5, dr 2610 ft; University 6, dr 2295 ft; University 7, dr 1140 ft; University 8, sd for repairs 435 ft; University 9, dr 350 ft; University 10, (rotary eqpt) dr 1510 ft. Benedum-Trees Interests' University 1, dr 2050 ft. W. H. Dunning et al's Sawyer Cattle Co. ranch 1, timbers. Mid-Kansas & Transcontinental Oil Co.'s McIntosh 1, spudding. Texas Pacific Coal & Oil Co.'s R. A. Walters 1, rigging up.

REEVES COUNTY—Dixieland Oil Co.'s Oates 2, sd 4505 ft. W. S. Troy et al's H. G. Hersheusen 1, sd 415 ft. Bell Reeves Oil Co.'s Findley et al 1, sd 1540 ft. El Paso-Saragosa Oil Co.'s George Wirt 1, sd 540 ft. Parker-

Burns Casing-Head Gas, Too

Plenty of Steam all the Time



The Gould Burner operates as well on low or high pressure gas as well as on all grades of fuel oils and keeps up steam all the time.

No soot in your flues. Try it.

Ask your supply house, or

GOULD BURNER COMPANY

Sinclair Bldg., Shreveport, La.

It's a Wilson

Beware of bootleg Dies

—order the genuine Wilson Tongs

—play safe

PATENTED

Wilson & Willard Mfg. Co.

MANUFACTURERS

It's a Wilson

Distributed By **WILSON OIL TOOLS CORPORATION**

Tulsa, Okla. 409 Atlas Life Bldg.

Factory and Distributors Office ~ 2301 E. Vernon Ave. ~ *Los Angeles, California, U.S.A.*

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COMPLETE
OIL FIELD EQUIPMENT AND SUPPLIES
Rotary or Cable

Ask the nearest Republic Store. They are distributed throughout the Mid-Continent and Coastal fields at strategic points, TO RENDER PROMPT ATTENTION TO ALL FIELD REQUIREMENTS. Only equipment that has built a reputation for service is handled.

For Instance:

Republic Iron & Steel Co.'s Tubing, Casing, Drive and Line Pipe.

Standard Seamless Tube Co.'s Seamless Upset Rotary Drill Pipe.

American Well & Prospecting Co.'s "Gumbo Buster" Rotary Equipment.

American Steel & Wire Co.'s and Broderick & Bascom's Wire Rope.

The Hughes Tool Co.'s Hughes Rock Bits, Hughes Disc Bits, and Hughes Special Milling Cutters.

Bovaird & Seyfang, and McNamar Oil Field Boilers.

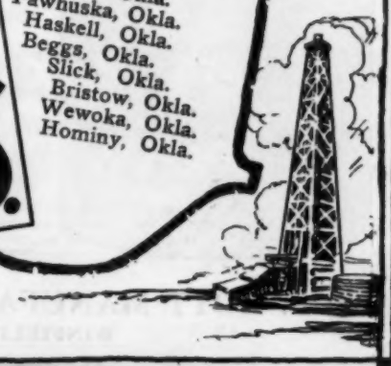
District Headquarters

HOUSTON, TEXAS
Corsicana, Texas (Mildred)

SHREVEPORT, LA.
Haynesville, La.
El Dorado, Ark.
Smackover, Ark.

WICHITA FALLS, TEXAS
Graham, Texas
Breckenridge, Texas
Electra, Texas
Burkburnett, Texas
Wilson, Okla.
Duncan, Okla.

TULSA, OKLAHOMA
Tonkawa, Okla.
Henryetta, Okla.
Yale, Okla.
Shidler, Okla.
Pawhuska, Okla.
Haskell, Okla.
Beggs, Okla.
Slick, Okla.
Bristow, Okla.
Wewoka, Okla.
Hominy, Okla.



REPUBLIC SUPPLY CO.

Hancock Oil Co.'s Johnson 1, sd 1930 ft. Willoughby Pet. Co.'s W. D. Cowan 1, sd 610 ft. Rodenbaugh & O'Connell's W. D. Casey 1, sd 845 ft. Pico Pet. Co.'s Johnson 1, sd 1930 ft. Texas Drilling & Dev. Co.'s Pecos Valley 1, sd 1105 ft.

RUNNELS COUNTY—Russell Prod. Co.'s Russell 1, sd 2500 ft.

SCURRY COUNTY—Col. A. E. Humphreys et al's H. P. Welborn 1, dr 2300 ft. Camp Springs Oil & Gas Co.'s L. E. Howell 1, lcn; W. R. Quinn 1, sd 3005 ft; W. V. Jones 1, sd 605 ft. Hermleigh Oil & Gas Co.'s J. W. Burris 1, sd 3005 ft. Stanton Oil & Gas Co.'s J. W. Riley 1, sd 3505 ft. C. C. Brandon's J. A. Kemp 1, lcn.

STERLING COUNTY—Co-Operative Lease & Dev. Co.'s Douthitt 1, preparing to resume drilling, td 1775 ft. Chicago-Texas Oil & Gas Synd.'s Durham 1, testing oil sand 1427 ft. Fidelity Oil Co.'s Hull 1, preparing to set 10-inch casing 1640 ft. Concho River Drilling Assn.'s George McIntyre 1, sd 500 ft.

TAYLOR COUNTY—Sanger Oil & Ref. Co.'s Hale 1, sd for casing 3070 ft; Tom Sawyer 1, dr 915 ft; Hollingshead 1, rigging up. Abilene-Texas Oil Co.'s J. C. High 1, sd 2135 ft.

TERRELL COUNTY—Southwest Texas Oil & Gas Co.'s S. W. T. No. 1, sd 3515 ft. Pittsburgh-Western Oil Co.'s Chas. Downey 1, sd 1260 ft.

TOM GREEN COUNTY—Ranger Investment & Dev. Co.'s Harris 1, dr 3235 ft.

VAL VERDE COUNTY—East Del Rio Oil Co.'s E. F. Russell 1, dr 1800 ft. Independent Operators' W. F. & W. E. Whitehead 1, showing oil, dr 2200 ft. Hodge-Wright et al's Belle Moore Estate 1, dr 650 ft.

WARD COUNTY—Arthur Pitts Oil Co.'s Soda Lake 1, sd 2205 ft; River 1, sd 4675 ft. Cook & O'Brien's G. W. O'Brien 1, sd 1175 ft. Trans-Pecos Oil Co.'s Longnecker 1, sd 1765 ft.

Jensen Brothers Straight Lift Jack

—the Jack With the Long Stroke

THIS is a complete Jack for deep wells and one that will not burn down. Increases production and saves time and labor, as well as wear on polish rod, packing, etc.

WE sell the Jensen Jack complete, or will sell only the frame which can be installed on your well, giving you a straight-lift jack.

Made in two sizes—No. 2 and No. 3

These Jacks have been in use in the fields for four years. We want to add a lot of producers this year to our list of satisfied users. Your name and address will enable us to back up what we say. Write TODAY!

JENSEN BROTHERS MANUFACTURING COMPANY

Office and Shop at 117 North Oak Street, NOWATA, OKLAHOMA

OIL FIELD WATER CAN

This is a shop-made galvanized water can with dead air space, without heat conductors, designed for oil field use.

Manufactured in the following sizes (inside capacity): 1½ Gal., 3 Gal., 5 Gal., 10 Gal.

We also make an oil field water cooler equipped with faucet.

For Sale At All Supply Stores

H. P. GOTT MANUFACTURING COMPANY

WINFIELD, KANSAS

North Texas Wildcats

COMPLETIONS

Company, Well, Location	Initial Production Bbls.	Depth
Clay County—		
Lone Star Gas Co.'s N. H. Martin 3	1¼	1685
Throckmorton County—		
Hale Tex Oil Co.'s B. F. Reynolds 1	*	965

DRILLING REPORT

(Note—This report does not include tests that have been shut down indefinitely.)

BAYLOR COUNTY—Batchelder & King's Mrs. E. S. Wallace 1, lcn. Cochran et al's J. W. Stevens 1, dk. B. Cranfill et al's W. B. Mills 1, bailing, sand 1416 ft. Independent Oil Co.'s Robertson County School Land 1, dk. C. B. Jetter et al's F Gatzki 1, dr 600 ft. Sunshine State Oil & Ref. Co.'s Mrs. E. S. Wallace 1, dr 1075 ft. Wurtz et al's Porter Ranch 1, dr 1310 ft.

CLAY COUNTY—Crude Oil Prod. Co.'s Kinder 1, sd 1060 ft. J. T. Cumley et al's J. D. Stine 1, rigged up and sd. E. C. D'Yarmett's O. Bullington 1, dr 300 ft. Gulf Production Co.'s H. Boddy 1, dr 3540 ft; C. M. Worsham 3, reset cas 3845 ft. Hamilton et al's J. Harper 1, sd 800 ft. Kimbrough & Montgomery's B. L. Hansard 1, dr 700 ft. Lone Star Gas Co.'s N. H. Martin 4, rigging up; Withers 3, r 1665 ft. Menky et al's J. C. Hunt 1, sd 1525 ft. Nebraska Oil & Gas Co.'s W. H. Myers 1, preparing to shoot, td 3360 ft. Scaling Oil Corp.'s Geo. Scaling 1, sd 1900 ft.

COOKE COUNTY—Big Indian Oil Co.'s B. W. Davis 1, sd 3050 ft. Red River Drilling Co.'s Whaley Jones 1, sd 1300 ft.

DENTON COUNTY—Hill Crest Oil & Dev. Co.'s J. H. Rayzor 1, sd 1350 ft.

GRAYSON COUNTY—Zee Tex Oil & Development Co.'s G. W. Cannon 2, sd 3000 ft; Griffin 1, sd 2325 ft. W. R. Shankle et al's J. Marshall 1, dk.

HARDEMAN COUNTY—Frizell Oil Co.'s M. S. Winbury 1, sd 3075 ft.

HASKELL COUNTY—J. O. Galloway et al's F. S. Quade 1, sd 50 ft.

KING COUNTY—Banks Oil Co.'s J. R. Hailey 1, sd 1630 ft.

KNOX COUNTY—Brazos Bend Oil Co.'s J. E. Clark 1, sd 2000 ft. White Oil Corp.'s Ward Ranch 1, sd 2815 ft.

MONTAGUE COUNTY—Bowie Chief Oil Co.'s C. H. Boedeker 1, sd 2725 ft. Boyd Oil Co.'s Mrs. M. H. Salmon 1, rigging up. Gulf Production Co.'s T. Benton 1, dr 3475 ft. P. F. Lesh et al's W. H. Wilson 1, cas trouble 1680 ft. Mascho Oil Co.'s J. L. Howard 1, ur 2750 ft. Texon Oil Co.'s L. Crenshaw 1-B, sd 1250 ft.

THROCKMORTON COUNTY — Adams & Kinnard's Reynolds Cattle Co. 1, dr 550 ft. Ashcraft et al's Polk County School Land 1, sd 1050 ft. Graves & Burton's Reynolds Cattle Co. 1, sd 75 ft. Hale Tex Oil Co.'s O. J. Woods 2, sd 500 ft.

WILBARGER COUNTY — Herrington & Robinson's McCaleb 1, dr 2725 ft. W. A. Matlock & Co.'s W. T. Waggoner 1, sd 1410 ft. Noble Oil Co.'s W. T. Waggoner 1, dr 1410 ft. South Vernon Oil Co.'s W. H. Stephens 2, dr 1150 ft; Stephens 3, preparing to pump, td 965 ft. T. & P. Oil & Coal Co.'s A. Smith 1, sd 700 ft.

Texas Panhandle Wildcats

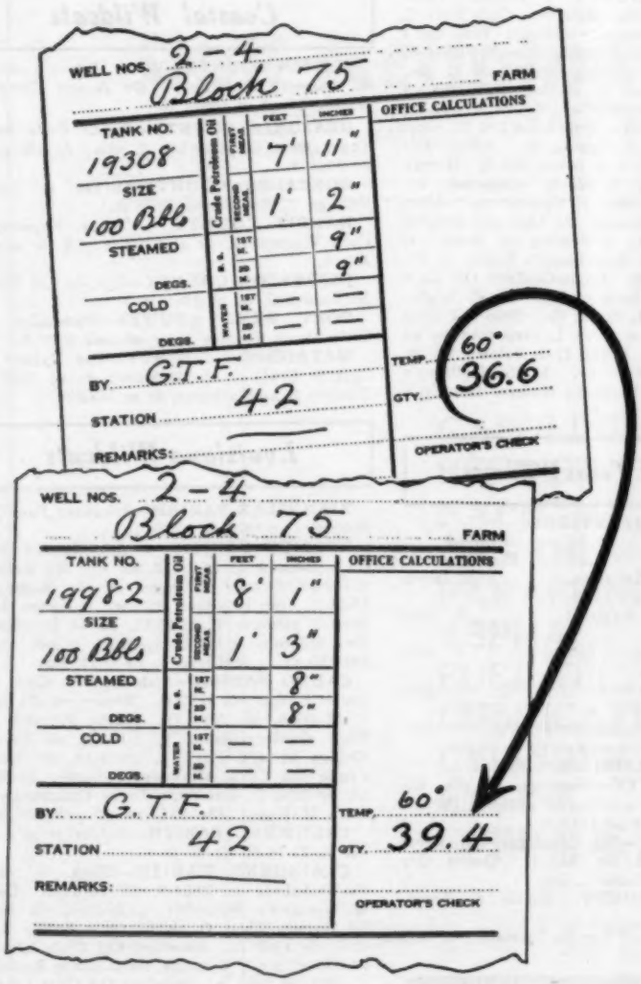
DRILLING REPORT

(Note—The drilling report below does not show wells that are shut down indefinitely.)

CARSON COUNTY — American Ref. Co.'s S. B. Burnett 1, dr 1250 ft. Culbertson Bros.' V. B. Armstrong 1, dr 400 ft. Gulf Production Co.'s S. B. Burnett 3, preparing to pump, td 3150 ft. W. W. Silk et al's S. B. Burnett 3, fsh 2890 ft. The Texas Co.'s Mary C. Burnett 1, dr 2284 ft; Mary C. Burnett 2, dr 1700 ft; S. B. Burnett 3, ur 2880 ft. W. T. Waggoner's McConnell 1, rigging up, td 3030 ft.

GRAY COUNTY—W. H. Holmes et al's J.

Same Lease-Same Wells 30 days Later



First Ticket:

A Burkburnett Gauge Ticket in April 1923

Second Ticket:

30 Days later — with a Parkersburg Vapor Tight Tank

40 cents more per barrel—these gauge tickets tell the story!

And all the production sold AT A BETTER PRICE than before evaporation was stopped! The name of the nationally known corporation who reported this saving will be given upon request.

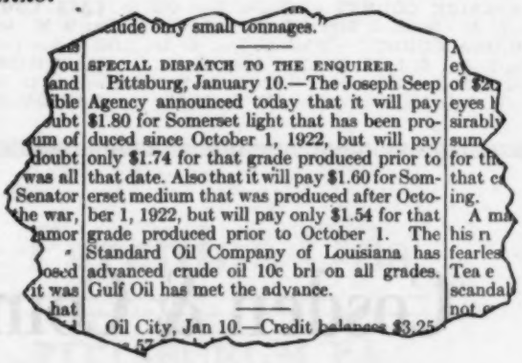
Think of the profits that corporation lost BEFORE evaporation was stopped! 40 cents per barrel—and about 4% of their production!

Read the clipping reproduced below! Whenever this happens—and it only indicates the tendency to buy crude on a gravity basis—your profits depend upon gravity.

Parkersburg Vapor Tight Tanks not only hold crude to its original gravity—they hold every barrel against losses through evaporation.

Parkersburg Service includes complete installations of Tanks and Equipment for retaining gas with crude at pressures consistent with customers' requirements, or for separation of gas for manufacture of gasoline or use as fuel.

Parkersburg Vapor Tight Equipment can be applied to any steel tank of any capacity, although the best results are obtained when this equipment is used with Parkersburg Bolted Steel Tanks.



include only small tonnages.

SPECIAL DISPATCH TO THE ENQUIRER.

Pittsburg, January 10.—The Joseph Seep Agency announced today that it will pay $1.80 for Somerset light that has been produced since October 1, 1922, but will pay only $1.74 for that grade produced prior to that date. Also that it will pay $1.60 for Somerset medium that was produced after October 1, 1922, but will pay only $1.54 for that grade produced prior to October 1. The Standard Oil Company of Louisiana has advanced crude oil 10c brl on all grades. Gulf Oil has met the advance.

Oil City, Jan 10.—Credit balances $3.25

Start Saving That Profit Today
Ask Our Nearest Representative for Full Particulars on Parkersburg Tanks and Equipment

The PARKERSBURG RIG & REEL COMPANY

Main Office and Works, Parkersburg, W. Va. ***New York Office,*** 30 Church St.

California Representatives, BUCK & STODDARD
485 California St., San Francisco, Calif.; Box 720, Arcade Station, Los Angeles, Calif.

District Offices and Distributing Warehouses from which Parkersburg Service is available

TEXAS
*Houston
Breckenridge
Corsicana
Iowa Park
Mexia
Orange
Ranger
Westbrook

WYOMING
*Casper
‡Rawlins

LOUISIANA
*Shreveport
Haynesville

KANSAS
Eldorado
Madison

WEST VIRGINIA
Parkersburg
Clarksburg

OKLAHOMA
*Tulsa
Bristow
Drumright
Hominy
Okmulgee
Wetumka
Tonkawa
Wilson
Shidler
Stroud
Wewoka

ARKANSAS
*El Dorado
Smackover
McNeil

MONTANA
Sunburst
†Winnett

*District Offices ‡Frick-Reid Supply Co. †Continental Supply Co.

Say you saw it in The Oil Weekly

S. Morse 1, set cas 1970 ft. The Texas Co.'s G. H. Saunders 1, dr 2570 ft. Wilcox Oil Co.'s Combs & Worley 1, dk.

COTTLE COUNTY—T. J. Woodley's A. C. Dulaney 1, dr 500 ft.

HEMPHILL COUNTY—Piney Oil Co.'s Hopkins 1, set cas 3500 ft.

HUTCHINSON COUNTY—Humphreys Oil Co.'s Johnson Bros.' 1, fsh 2600 ft. Montgomery Oil Co.'s Johnson Bros 1, sd 1925 ft. Panhandle Ref. Co.'s J. J. Perkins 1, lcn. Plains Oil Co.'s J. F. Weatherly 1, sd 3260 ft. Producers & Refiners Co.'s L. Bivens 1-B, sd 2650 ft; making 75,000,000 cubic ft gas. Watchorn Oil Co.'s Cable 1, ur 2050 ft. Wilson et al's Johnson Bros. 1, fsh cas 300 ft.

MOORE COUNTY—Producers & Refiners Co.'s Masterson 1, set cas 800 ft.

POTTER COUNTY—Producers & Refiners Co.'s L. Bivens 1-A, dr 3215 ft; Biven 2-A, dr 2560 ft.

ROBERTS COUNTY—Roy Schenck et al's O. Laughlin 1, sd 400 ft.

WHEELER COUNTY—Mid Continent Oil Synd.'s Ember 1, dk. H. C. Tyrell et al's F. E. Sheldon 1, dr 1820 ft. J. Whittington's Williams & Laycock 1, reset cas 2022 ft.

San Antonio District Wildcats

ATASCOSA COUNTY — DeLange Eiser Co.'s Tom 2, waiting on cement to set at 2950 ft.

DUVAL COUNTY—Union Sulphur Co.'s Tinney 1, dr 610 ft. Mar-Tex Oil Co.'s Ridder 1, dr.

JIM HOGG COUNTY—Miami-Balderas Oil Co.'s No. 1, dr. Diamond S. Oil Co.'s Doering 1, dr. Homer & Tyson's No. 1 Tyson, Sur. 230, dr 900 ft in hard rock. Weber Oil Co.'s Holbein 3, fsh 3210 ft. Zapata Oil Co.'s Thompson 3, dr at 1200 ft. J. W. Pippin's No. 1, Sur. 51, resumed dr at 1600 ft.

LIVE OAK COUNTY—Grubstake Investment Assn.'s J. W. Nichols 3, waiting on rotary and pump; Jim Nichols 2, dr. Olcheweske Oil Co.'s J. M. Brown 1, dr. Lobo Oil Co.'s Reagan 6, dr below 1000 ft. Harkey Oil Corp.'s Herring 1 and 2, dr. McCoy's Rose Murray 3, lcn.

MAVERICK COUNTY — Eagle Pass Oil Co.'s 2, dr. Southern States' Indio 1, dr.

MEDINA COUNTY — Wheless' Jose de la Roche 1, dr. B. J. K. Oil Co.'s Adams 1, dr. California-Medina Oil Assn.'s Rothe 1, dr. William Oil Co.'s Jungman 1, Sur. 104, dr. Middle States Oil Co.'s No. 1, Sur. 799, lcn. Charles Jackson et al's Adams 1, Sur. 12, lcn. Young et al's Tom Brendle 1, dr. William Metzker's Ward 1, dk. Carl Bros.' Durst 1, Sur. 15, dr below 1500 ft. Herman Haught's No. 1, Sur. 459, dr. L. N. Knight et al's Wipff 1, Sur. 16, dr. M. G. Haskell's Fritz Faselor 1, dr; Harrison 1, lcn.

McMULLEN COUNTY — Pioneer Prod. Co.'s Lowe 1, dr. San Balt Pet. Co.'s Stitz 5, dr 300 ft. Pioneer Consolidated Pet. Co.'s Martin 1, dr. Bower Leasing Synd.'s Fisher 1, bailing at 760 ft, making 500,000 cu ft gas. Arthur Inglis' Fisher 1, making 1,500,000 cu ft gas. South Texas Oil Co.'s Brown 1, waiting on machinery; Calliham 3, dr in at 724 ft. Geo. B. Pickett's Jacob 1, rigging up. Adams-Seifert's J. D. Mahoney 1, dr below 280 ft. George E. Smith's Fisher 1, dr 922 ft. Grubstake Investment Assn.'s Jacobs 3, rigging up. Allen Oil Co.'s Stitz 1, flowing 125 bbls and making 2,000,000 cu ft gas; 2, flowing by heads; 3, dr 640 ft. Hoad & Scharbauer's Fisher 4, dr; 5, rigging up; 6, dk. Coyle-Concord Oil Co.'s No. 1, cemented 8-inch casing. B. C. Lightfoot & Son's Lark 1, dr; 2, dk. Frio Oil Co.'s Calliham 1, on pump; Cox 1, preparing to go on pump. Finnell's Byrne 1, dr below 1550 ft. Wm. Lewrie's Lark 1, dr. M. S. Holliday's Stitz 1, dr 495 ft. Southern Natural Gas Co.'s Lark 6, dk.

Northeast Texas Wildcats

COMPLETIONS

Company, Well, Location—		Initial Production Bbls.	Depth
Bowie County—			
Tri State Oil Co.'s Taylor 1.....	*		2900
Cass County—			
Hughes Springs Synd.'s Stoval 1....	*		2703
Sabine County—			
Deering et al's Harris 1.....	*		2600
Shelby County—			
"We Win" Oil Co.'s Ashberry 1....	*		1937

DRILLING REPORT

BOWIE COUNTY—Fitzhugh et al's Rochelle 1, cementing 6-in cas at 2146 ft; Perkins 1, setting 6-inch cas at 1943 ft.

CASS COUNTY—Mid-Continent Oil Lease Corp.'s M. Stats 1, dr 2376 ft. Queen City Oil & Gas Co.'s Richie 1, lcn.

HARRISON COUNTY — Fuller & Scott's Furrh 1, dr 700 ft.

MARION COUNTY — McCormack et al's McCay 1 dk. Wanzell et al's Stallcup 1, dr 2710 ft.

PANOLA COUNTY—Magnolia Pet. Co.'s Carrie G. Steel 7, dr 1538 ft; Lawless 1, dk; Anderson Est. 1, dr 2780 ft.

SAN AUGUSTINE COUNTY — Snell & Stratford's Flournoy 1, rigging up to drill.

Coastal Wildcats

AUSTIN COUNTY—W. W. Johnson and H. R. Carroll's San Felipe De Austin Townsite Outlot 16, d at 1229 ft.

BRAZORIA COUNTY—Texas Co.'s South Texas Dev. Co.'s 1, blk 2, abn; 2, blk 1, dr at 1445 ft.

GONZALES COUNTY—Bryan & James' Billings 1, dr around 3000 ft.

HARRIS COUNTY — Texas Exploration Co.'s Warren 17, dr at 2200 ft; 18, dr around 250 ft.

JEFFERSON COUNTY—Rycade Oil Corp.'s McFadden 2, dr at 5265 ft.

FORT BEND COUNTY—Pathfinder Oil Co.'s Davis Trustee 1, dr around 1000 ft.

MATAGORDA COUNTY—The Rycade Oil Corp.'s Gray 1, at Markham, dr at 3183 ft; Hudson 2, at Markham, dr at 3683 ft.

Louisiana Wildcats

BIENVILLE PARISH—Arkansas Fuel Co.'s Harrell 1, 6-18-5, dr 2775 ft.

BOSSIER PARISH — Atlantic Oil Prod. Co.'s Bodcau 1, 24-23-12, dr 400 ft; Bolinger 1, 29-23-11, lcn. Bolinger et al's Bodcau 1, 15-23-12, set 12½-inch 267 ft. Johnson Drlg. Synd.'s Johnson 1, 18-18-11, sd 14 ft. Square Deal Oil Synd.'s Hobbs 1, 18-18-11, lcn. Standard Oil Co.'s McCloud 1, 13-19-11, rig.

CADDO PARISH—Alabama Pet. Co.'s Barlow 1, 5-21-15, sd 3752 ft. Brewer et al's Sharp 1, 15-18-16, sd 2750 ft. Caddo Western Gas Co.'s Gardner-Blades 1, 2-16-15, sd 2600 ft. Collins et al's Levy 1, 23-19-14, dr 700 ft. Crude Oil Co.'s Alexander-Ledbetter 1, 27-16-14, dr 3210 ft. Louisiana Texas Community Oil Co.'s McKay 1, 15-23-16, set 10-inch 100 ft.

CALDWELL PARISH—Culver et al's Culver 1, 21-14-4e, dr 50 ft.

CLAIBORNE PARISH—Block O. & G. Co.'s Aubrey 1, 20-21-8, sd 1610 ft. Collins & Woodley's Reynolds 1, 30-21-4, dk tmbrs. El Dorado Chief O. & G. Co.'s Gandy 1, 36-22-7, dr 1360 ft. Standard Oil Co.'s Lloyd 1, 10-20-5w, lcn. Triangle Drlg. Co.'s Ranich 1, 17-22-5, sd 3005 ft. Standard Oil Co.'s Lloyd 1, 10-20-5w, lcn.

DE SOTO PARISH—Terrell et al's Porter 2, 15-12-13, dk. Ulrey et al's Frost-Johnson 1, 3-11-15, to set 6-inch 2680 ft.

LA SALLE PARISH — Helm & Burch's Urania 1, 21-11-2e, dr 810 ft. Stovall Drlg. Co.'s Central Lumber 1, 27-10-2e, dr 630 ft.

LINCOLN PARISH—McCauldin et al's Hudspeth 1, 28-20-4, dk.

OUACHITA PARISH—Haynes O. & G. Co.'s Dixie Lbr. 2, 17-17-3e, dr 2730 ft.

UNION PARISH—Allison et al's Heard 1, 25-23-1w, lcn. Cargile et al's Heard 1, 25-21-3w, dr 1290 ft. Danciger O. & R. Co.'s Thompson 1, 16-20-3e, lcn. Davidson & Palmer's Frost-Johnson A-1, 17-23-1e, sd 77 ft. Dawson & Perritt's Hodges 1, 27-19-13, dk tmbrs. Feazel et al's Green 1, 19-23-1e, sd 80 ft. Gulf Ref. Co.'s Green 1, 19-23-1e, dr 2505 ft; Security Trust 1, 23-23-1w, to plug back to 2528 ft. Johnson et al's Pryor 1, 35-22-2w, set 12½-inch 480 ft. Lide et al's Templeton 1, 18-23-1e, bailing sw and oil 2201 ft. Love & Clark's Frost-Johnson 1, 7-23-1e, dr 1720 ft. Neddo Petroleum Investment Corp.'s Smith 1, 2-23-3w, to skid over. Noe et al's Gulley 1, 36-21-1e, fsh 2507 ft. Ohio Oil Co.'s Adkins 1, 30-23-1e, dk tmbrs.

WEBSTER PARISH—Fortuna Oil Co.'s Cox 1, 23-21-10, lcn; Merritt 2, 14-21-10, lcn; Pruitt 1, 17-21-9, dry 2680 ft; Staten 1, 31-22-10, dr 3430 ft. Humble O. & R. Co.'s Babb 1, 14-21-10, dr 200 ft; Babb 2, 14-21-10, lcn; Bodcau Lumber Co. 1, 14-21-10, lcn; Hodges 1, 12-21-10, lcn. Ohio Oil Co.'s Merritt 2, 14-21-10, lcn. Olmstead et al's Hudson 1, 17-19-10,

Cosden & Company

HIGH GRADE
PETROLEUM PRODUCTS

TULSA, OKLAHOMA

Gulf Refining Company

OKLAHOMA
TEXAS
LOUISIANA

Refiners of PETROLEUM

GASOLINE
REFINED OIL
NAPHTHA
GAS OILS
PARAFFINE WAX
ASPHALT
FUEL OIL
LUBRICATING OILS
CYLINDER
ENGINE
CORDAGE

Red and Pale Paraffine Oils

General Sales Offices: PITTSBURGH, PA.

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Magazine Point (Mobile), Ala.
Providence, R. I.
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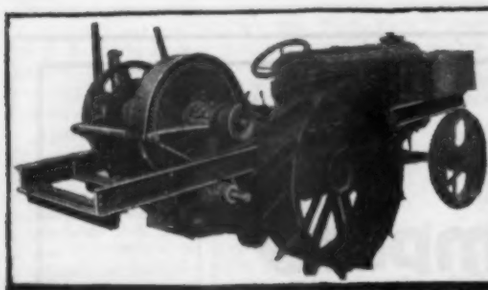

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dr 275 ft. Smitherman & McDonald's Boucher 1, 21-23-11, to try to plug off sw 2705 ft. Stack & Egger's Bible 1, 8-20-9, dr 1040 ft. Thigpen & Herold's Crichton 1, 7-19-10, lcn. White Oil Corp.'s Gleason 1, 31-22-9, dr 2000 ft. Ohio Oil Co.'s Hodges 3, 15-21-10, dk tmbrs; Holloway 1, 23-21-10, lcn; Crichton 1, 21-21-10, lcn.

Arkansas Wildcats

COMPLETIONS

Company, Well, Location—	Initial Production Bbls.	Depth
La Fayette County—		
Ken-Saw Pet. Co.'s Fee 1, 31-19-24	*	3240
Ouachita County—		
Amerada Pet. Co.'s Lester Mill Co. 1, 9-13-19	*	2700

DRILLING REPORT

CALHOUN COUNTY—Harris & Bickley's Freeman-Smith 1, 26-16-13, sd 1152 ft. Vitex Oil Co.'s Adams 1, 29-12-12, to test 2958 ft.

COLUMBIA COUNTY—Brown et al's Robinson 1, 23-18-23, sd 2895 ft. De Soto & Hickman's Fullenwilder 1, 3-16-21, sd 1070 ft. Dowdy et al's Fullenwilder 1, 12-17-22, to bail again at 2234 ft; showed oil. Houston Oil Co.'s Baker-Joiner, 2-18-22, dk. Hosey et al's Haire 1, 30-19-18, sd 2156 ft. Kemp et al's Emerson 1, 7-19-19, dr 635 ft. Miller et al's Watts 1, 20-16-18, sd 1990 ft.

DALLAS COUNTY—Conway et al's Riggs-Matlock 1, 33-8-15, sd 1805 ft.

DREW COUNTY—Graves et al's Karnes 1, 10-13-6, set 6-inch 1748 ft. Rhodes et al's Martin 1, 27-12-8, sd 1529 ft.

GRANT COUNTY—The Texas Co.'s Chicago L. & T. Co. 2, 16-6-13, rig.

HEMPSTEAD COUNTY—Dudney et al's Spates 1, 19-12-27, sd 2000 ft. Hope Columbus Oil Co.'s King 2, 24-11-24, to re-set 4½-inch 2130 ft. Martin et al's Adams 1, 36-12-27, sd 2216 ft. Meyer et al's Nicholls 1, 17-11-25, fsh 1870 ft.

LITTLE RIVER COUNTY—Gaines et al's Thomas 1, 15-13-29, dr 2410 ft. Grote et al's Allen 1, 2-13-29, dr 2645 ft. Johnson et al's Hawkins 1, 10-11-31, dr 1100 ft. Red River Valley Oil Co.'s Taylor 1, 29-13-29, sd 2790 ft. Sullivan O. & G. Co.'s Ludlow 2, 32-11-32, sd 2600 ft.

MILLER COUNTY—Kress et al's Thompson 1, 33-14-28, dr 750 ft.

NEVADA COUNTY—Dudley et al's Grayson-McLeod 1, 32-11-21, dr 615 ft. Ken Ark Pet. Co.'s White 1, 11-13-21, dr 2115 ft. Miller-Burnham-Hawley Synd.'s Perry 1, 12-15-22, sd 1291 ft.

OUACHITA COUNTY—Eck & Boger's Criner 1, 21-15-19, dk. Foster et al's Harvey 1, 32-11-19, sd 1955 ft. Hopkins et al's Allen-Curry 1, 33-14-19, sd 2125 ft. Pure Oil Co.'s Moline 1, 21-11-17, dr 2515 ft.

UNION COUNTY—Bondurant et al's Turbeville 1, 9-18-12, dr 2015 ft. Ray et al's Long 1, 28-16-14, sd 2171 ft. Starke et al's Little 1, 21-19-12, setting 6-inch 2160 ft. Tarver et al's Sample 1, 36-19-13, dr 2405 ft. Traffic Oil Co.'s Goodwin 1, 20-16-14, dr 2275 ft.

Oklahoma Wildcats

ALFALFA COUNTY—McGinnis & Ward's Watts 1, C NE SW SE 21-27-10w, r 2410 ft. Armstrong, Henley & Piffles' Turnbull 1, C NW SE NW 23-24-11w, sd 50 ft. Haley, Barber & Pulse's Joe Guinn 1, C NE SE 15-24-9w, dr 2400 ft.

ATOKA COUNTY—McPhearson et al's Wild 1, SWc NW 7-2-9, sd 3700 ft. Hanson et al's Dabney 1, C SE NW 17-4-11, sd 100 ft. J. F. Torrence et al's Fee 1, SWc NE 1-2-9, sd 1350 ft. Wapanucka Dev. Co.'s Underwood 1, C W L SE SE 28-2-9, sd 1700 ft.

BECKHAM COUNTY—Bollion Oil Co.'s Green 1, SW SW 34-10-24w, sd 1360 ft. Ship-Nash et al's No. 1, SEc NW 35-9-25w, dr 2525 ft. J. A. Pringle's Burkholder 1, C NE NE 6-9-24w, sd 3520 ft. Burlingame & Dovel's Dugger 1, SEc NW NE 25-10-23w, sd 525 ft.

BLAINE COUNTY—Thompson et al's Dick-

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erman 1, C SE SE SE 26-15-12w, sd 3213 ft. Meyers et al's Chronister 1, SEc NW NE 7-18-16w, sd 965 ft. Okomo Oil Co.'s Edlemaier 1, SWc 21-15-10w, dr 625 ft.

BRYAN COUNTY—Lyon et al's Coombs 1, SEc SW NW NE 11-8-9, rig. Berlieu et al's Ramsey 1, NWc NE NE 32-7-8, sd 2475 ft. Alexander's Hampton 1, SEc NE 26-7-11, rig.

CLEVELAND COUNTY—Garr Oil Co.'s Holland 1, NEc SE 31-10-4, sd 2620 ft.

CUSTER COUNTY—Hoover Oil Co.'s No. 1, NWc SE 34-13-14, sd 2510 ft.

COAL COUNTY—Basis Oil Co.'s Heck 1, SEc 18-2-9, rig. Bearman et al's Payte 1, SWc NW NE 32-2-9, sd 2780 ft. Guy Vaughn's Nichols 1, SWc 1-1-11, rig; Downard 1, NWc SW 16-2-10, sd 3260 ft. McPhearson et al's Jamison 1, NWc NE NE SW 24-1-8, sd 300 ft. Empire's Walker 1, C SE SE 4-2-9, rig.

GRANT COUNTY—Ossenbeck et al's Hoffman 1, SEc 23-29-3w, sd 3515 ft. Embry et al's Edwards 1, C SE SE NW 20-26-4, sd 1000 ft. Day Oil Co.'s Vandatta 1, SWc NW 8-26-2w, sd 1270 ft. Midwest & Gulf's Moon 1, NEc NW 8-27-8w, sd 2010 ft.

GREER COUNTY—Western Nat. Gas Co.'s De Armond 1, NWc SW 23-7-23, dr 2260 ft.

HARMON COUNTY—Keyes Oil Co.'s No. 1, NWc SW 21-2-26w, dr 3005 ft.

HUGHES COUNTY—Flescher Pet. Co.'s Smith 1, NWc NE NW 8-9-12, sd 3530 ft. W. J. Thurber's Foster 1, SEc SW SE 5-7-8, P. B. to 1808 ft. Middle States Oil Co.'s Arm 1, NWc 13-16-11, sdtr 3585 ft. Kingwood Oil Co.'s J. Hawkins 1, SEc NE 12-7-9, rig.

JACKSON COUNTY—Douglas Oil Co.'s Jackson 1, NWc SW SE 20-3-20, dr 3575 ft. J. D. Wade's No. 1, C SW NW 36-2-23, sd 2110 ft.

JEFFERSON COUNTY—Gant et al's Skelton 1, C NE NE NW 22-3-6w, sd 3017 ft. Shawver et al's Anderson 1, SEc NE 31-4-8w, sd 1200 ft. J. C. Cook Oil Co.'s Gibson 1, C NW NW NW 36-5-8w, dr 2420 ft. Landis et al's Standfield 1, SEc 33-7-6w, sd 1150 ft.

KAY COUNTY—Ostot Dev. Co.'s Rohoe 2, C NW NW SE 3-27-1, sd 3508 ft; Shrimp 1, NEc NW 20-29-2, lcn. Alcorn Oil Co.'s Mills 1, C NW SE 24-26-1, dr 3555 ft; Hadley 1, NEc 2-26-2, fsh 1875 ft. T. B. Slick's Chism 1, SEc NW 32-29-2w, dr 2550 ft.

KIOWA COUNTY—Conner et al's No. 2, NEc NW NW 34-7-16, crooked hole, sd 1460 ft.

LINCOLN COUNTY—Sun Ray Oil Co.'s Gallagher 1, C N L SE SE 18-13-5, dr 2930 ft. Flynn & Morgan's Baker 1, SEc 2-14-5, rig. Magnolia Pet. Co.'s Bray 1, NWc SW SW 18-14-5, dr 70 ft. P. & R. Corp.'s Hainzig 1, SWc NW SW 14-13-6, dr 730 ft. Douglas Oil Co.'s Ewing 1, NWc 7-13-3, dr 1110 ft. J. C. Cook's Richardson 1, SWc NE SW 8-12-5, rig.

LOGAN COUNTY—Buford-Brim Oil Co.'s Newman 1, NWc NE 32-19-3w, sd 2480 ft. Okla. Drlg. Co.'s Johnson 1, SEc SW 36-15-2w, sd 1716 ft. Franklin Oil Assn.'s Moore 1, NWc SE SE 28-18-4w, sd 1225 ft. McMunn & Nixon's Fields 1, SWc NE SE 35-17-4w, sd acct. storm. Haley & Pioneer Pet. Co.'s Quier 1, SWc SE 33-18-3w, rig. Leeright et al's Blair 1, C SE 28-16-1e, rig.

LOVE COUNTY—Wiskenheiser et al's Beal 1, NEc SE NW 13-5-3, co 2465 ft. Drillers Syndicate Oil Co.'s Wilson 1, NWc NE 11-7-2, sd 2830 ft.

McCLAIN COUNTY—Day Oil Co.'s Ball 1, SEc NW NE NE 9-5-3, dr 3065 ft.

MARSHALL COUNTY — Magnolia Pet. Co.'s Everett 1, C NE NE SE 36-7-5, dr 3700 ft. Van Vlecks' Chaffin 1, C SE NW NW 27-5-4, dr 3380 ft. Winters et al's Purday 1, SWc NE SE NE 18-6-7, sd 720 ft. Lane & Watson's Sacra 1, C NW SE NE 10-5-5, co 1550 ft.

OKLAHOMA COUNTY — Firestone Oil Co.'s School 1, NWc SE 36-11-3, sd 3470 ft. Big Three Oil Co.'s Wild 1, SWc NE 31-1-2, sd 1390 ft.

PONTOTOC COUNTY — Harper et al's Dener 1, NWc SE SE 19-5-7, running 10-inch 1350 ft. Smith et al's Norris 1, SWc SE 34-4-6, fsh 2430 ft.

POTTAWATOMIE COUNTY — Ossie Oil Co.'s Howell 1, SWc NE 13-10-2, r 2595 ft. Magnolia Pet. Co.'s Brendenberg 1, C SE SW NW 18-7-5, dr 3050 ft. Davey Detrick's McGahey 1, SEc 10-6-2, dr 2865 ft. H. G. Guinnup's Floyd 1, SWc SE 13-11-3, dr 2950 ft. North American Oil Co.'s Madgett 1, NWc 25-10-4, sd 340 ft. Maud Oil Products Co.'s Yinson 1, NEc NW 18-7-5, sd 2935 ft. McMann Oil Co.'s Neghan 1, SWc NW 19-7-4, sd 100 ft. Day Oil Co.'s Bell 1, SEc NW NE NE 9-5-3, dr 3065 ft.

ROGER MILLS COUNTY—Twin Hills Oil Co.'s McClure 1, NWc 15-15-26w, sd 2370 ft. Colorado Oil Co.'s No. 1, C NW NW NW 32-16-22w, fsh 2237 ft. Mutual Oil Co.'s No. 1 C NE NE NE 1-16-21w, fsh 2485 ft. Martin et al's Kelly 1, C NW SE 32-12-26w, sd 460 ft. Trio Oil Co.'s No. 1, SEc NW SW 3-13-26w, co 3036 ft.

SEMINOLE COUNTY—Ossenbeck et al's Davis 1, C SW NE 10-8-7, r 3340 ft. Wm. McDougall's Belle Dindy 1, C SW SW 20-6-7, top sand 2675 ft, 3M gas. Maxwell et al's Carty 1, C NE NW 36-6-6, dr 910 ft. Link Oil Co.'s Carolina 1, C SE NW 14-6-7, sd 2230 ft. T. B. Slick's Sanny 1, SWc 18-6-7, dr 1715 ft. Black et al's Stewart 1, NWc SE 11-5-8, lcn.

TILLMAN COUNTY—Luffborough et al's Finley 1, SWc NE NW 23-2-17w, sd 3200 ft.; No. 1, SWc 34-1-17w, rig. Battles & McBride's Duncan 1, SWc NE 7-2-18w, sd 1300 ft. A. L. Spears' Cousb 1, NWc NE SW 10-4-18w, sd 1050 ft.

WASHITA COUNTY — R. B. Hartman's Montgomery 1, NEc SW SE 23-9-17w, sd 3060

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ft. Santrock Bros.' No. 1, SWc NE 20-8-16w, fsh bailer 2905 ft. McCoy et al's Pretters 1, C SW SW NE 9-8-15w, dr 1725 ft.

Kansas Wildcats

BARBER COUNTY—R. B. Brown's No. 1, NWc SW NW NW 33-30-14w, sd 3494 ft.

BARTON COUNTY—Cheyenne Oil Co.'s Sooy 1, SWc SW 27-18-12w, fsh 3525 ft. Haynes et al's No. 1, SWc NW 31-18-12w, dr 810 ft. H. W. Nieswanger's Everleigh 1, SW SE 1-18-12w, lcn.; Weiker 1, SW SE 2-19-12w, sd 1090 ft. Mountain States O. & G. Co.'s No. 1, SEc NE 22-18-13w, dr 2860 ft. McMahan & Sampter's No. 1, NWc 21-19-12w, dr 2300 ft. Huffine et al's Smith 1, C NE SE NW 17-19-11w, rig.

COFFEE COUNTY—Sunbeam Pet. Co.'s Andrews 1, NWc NE 33-20-15, rig. Thad. O'Day's Allen 1, NWc SE 13-21-15, sd 900 ft.

FINNEY COUNTY—Garden City O. & G. Co.'s Wann 1, SEc SE 36-21-30, sd 2890 ft.

JEFFERSON COUNTY—Northern Counties' Edwards 1, SEc NW NW 13-9-19, fsh 3400 ft.

OSBORNE COUNTY—Liggett et al's Worley 1, NWc NW 34-10-15w, rig. Delhi Oil Co.'s Forman 1, SWc SW 20-10-11w, sd 3250 ft.

OSAGE COUNTY—Sharpless & Stark's Kirklen 1, SEc NW 36-17-14, lcn. Rodgers & Bittle's Bertha 1, SEc NW 28-17-15, lcn. Mul-Vit Dev. Co.'s Neil 1, NEc NW SW NE 8-17-17, sd 2735 ft. Moyer et al's Williams 1, NEc SW NW 12-18-14, rig. Shade-Smith & Page's No. 1, SEc SW SW 16-18-17, rig.

POTTAWATOMIE COUNTY—Crawford et al's Stewart 1, C E L SE SE SE 17-9-12, rig; Geischabert 1, SWc SE SW SW 31-9-12, rig; St. Mary's 1, SWc 11-1-12, sd 2290 ft.

RICE COUNTY—H. T. Proctor's Taylor 1, NWc 15-21-10w, lcn. Rino Oil Co.'s Dees 1, SEc SW NW 35-19-6w, rig.

RILEY COUNTY—Richie et al's Boyle 1, SEc 36-7-4, sd 2601 ft. Welton Oil Co.'s No. 1, NWc 20-10-12, sd 1600 ft. Pawnee Oil & Gas Co.'s Marks 1, SWc NE NW 26-10-6, sd 1700 ft.

RUSSELL COUNTY—Valerius Oil Co.'s Munsell 1, NWc NE 17-12-15w, rig; Phillips 1, SWc 3-13-13w, dr 1060 ft; Oswalt 2, SEc SW 8-12-15w, rig. Merriam et al's Murphy 1, C SW 11-12-12w, lcn. Streeter & Stearns et al's Oswalt 1, SEc SW SW 8-12-15w, rig. P. & R. Corp.'s Haise 1, NWc SE 24-12-15w, rig. Patton et al's Wolbridge 1, SWc NE 4-13, 15w, fsh 360 ft. Merriam & Findeis & Sutter's Milke 1, SWc SE SW 20-12-15w, dr 350 ft. Hames, Findeis & Sutter's Dodge 1, SEc SW 29-11-15w, rig. Lewis Oil Co.'s Haise 1, SEc NW 31-12-14w, lcn.

SEWARD COUNTY—C. T. Dev. Co.'s Wood 1, NWc SE 34-34-34, sd 700 ft. Seward O. & G. Co.'s Seeley 1, NEc NW 20-33-33, sd 2427 ft. Traders O. & G. Co.'s Bunting 1, SWc NE SW 4-25-34, sd 1600 ft.

SUMNER COUNTY—Collins & Frantz's Young 1, SEc NE 33-33-2, dr 2850 ft. Champlin Ref. Co.'s Heskett 1, SEc 34-10-1w, dr 2250 ft.

TREGO COUNTY—Morton et al's Kyser 1, C E½ 9-11-22, sd 1406 ft.

WASHINGTON COUNTY—Barnes O. & G. Co.'s Wickham 1, SEc SW 9-5-5, sd 1305 ft.

WOODSON COUNTY—Equity Oil Co.'s Solomon 1, SWc NE NW 30-26-17, sd 2960 ft.

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County and District

Catalog on Application

HEYDRICK MAPPING COMPANY,

Wichita Falls, Texas

INDICATED DELIVERIES TO DOMESTIC CONSUMERS OF DOMESTIC AND IMPORTED CRUDE PETROLEUM (Barrels)

(Based on formula—indicated deliveries equal production plus imports minus exports plus stocks at beginning of month minus stocks at end of month.)

	January, 1924*		February, 1924			
	Total	Daily average	Total	Daily average	Jan.-Feb. 1924	Jan.-Feb. 1923
Domestic petroleum by fields of origin:						
Appalachian	1,981,000	63,905	2,345,000	80,862	4,326,000	4,232,000
Lima-Indiana	187,000	6,032	174,000	6,000	361,000	309,000
Ill. & S. W. Ind.	702,000	22,645	777,000	26,793	1,479,000	1,468,000
Mid-Continent	28,832,000	930,064	26,940,000	928,966	55,772,000	47,027,000
Gulf Coast	2,693,000	86,871	2,296,000	79,172	4,989,000	6,335,000
Rocky Mountain	2,668,000	86,065	2,463,000	84,931	5,131,000	3,052,000
California	19,761,000	637,452	19,504,000	672,552	39,265,000	30,175,000
Deliveries and Exports	56,824,000	1,833,032	54,499,000	1,879,276	111,323,000	92,598,000
Exports of Domestic Crude Oil	1,480,000	47,742	1,657,000	57,138	3,137,000	1,399,000
Deliveries	55,344,000	1,785,290	52,842,000	1,822,138	108,186,000	91,199,000
Imported petroleum.	6,918,000	223,161	6,166,000	212,621	13,084,000	14,384,000
Deliveries of domestic and imported Pet.	62,262,000	2,008,451	59,008,000	2,034,759	121,270,000	105,583,000

*Revised.

DAYS' SUPPLY OF PIPE LINE AND TANK FARM STOCKS OF CRUDE PETROLEUM*

(Based on monthly rate of deliveries to domestic consumers and exports)

January 31, 1924	February 29, 1924	February 28, 1923
162	160	139

*Revised.

NUMBER OF PRODUCING OIL WELLS COMPLETED*

January, 1924†	February, 1924	February, 1923
774	904	1,094

*For states east of California, from Oil & Gas Journal; for California, from the American Petroleum Institute. †Revised.

SHIPMENTS OF CALIFORNIA OIL THROUGH PANAMA CANAL TO EASTERN PORTS IN UNITED STATES

(From the Panama Canal Record)

(Compiled from declaration by masters of vessels reported in tons of 2,240 pounds)

	Jan., 1924	Feb., 1924	Jan.-Feb., 1924	Jan.-Feb., 1923
Crude oil: Long tons	692,443	634,336	1,326,779	373,305
Barrels (approx)	5,055,000	4,631,000	9,686,000	2,725,000
Refined products: Long tons	43,710	40,747	84,457	10,042

Receiver Appointed in Another Teapot Cause

Casper, Wyo., April 8. — Receivers have been appointed for the SE¼ Sec. 20-39-78 in the Teapot Dome. This property has been in litigation by the R. G. Taylor interests and the Mutual Oil Company on one side and the Mammoth Oil Company on the other.

W. L. Connolly, receiver representing the Mammoth Oil Company made the following statement in regard to the property:

"I have been appointed one of the receivers for the property in litigation known as the Teapot Dome. This appointment was made on the recommendation of the defendant. I shall, however, in performing my duties have nothing in view excepting the preservation of the property, so that if the government shall succeed it will receive all that it is entitled to, and if the defendant shall succeed it will receive its entire property in the best form. I have and shall have no other policy than that. The court will of course decide the program of operation of the property."

Oil Leases **Oil Leases**

Texas' Newest Oil Field, Sheffield Terrace of the Marathon Fold

Crocket and Pecos Counties

For IMMEDIATE disposal. High class desirable acreage right in with largest Mid-Continent oil companies now starting extensive development program. This is not cheap or off-structure acreage but a BARGAIN and will merit your investigation. All 10 year leases and low rental. Exceptional opportunity for solid smaller companies to get into a field which has, without question, tremendous possibilities. Write for maps, prices, etc.

ACT QUICKLY DON'T OVERLOOK THIS

C. W. WEBSTER

1001-1002 W. T. Waggoner Building, Fort Worth, Texas.

23 Years in Leasing Business, 13 Years in Texas

References: Texas National Bank, Ft. Worth, Texas.

F. W. Freeborn Engineering Corporation

Engineers, Appraisers, Constructors, Managers For

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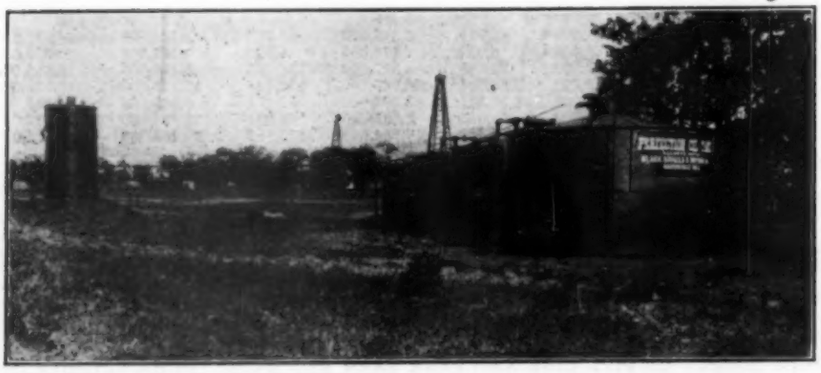
Valuations for Income Tax, Reorganization, Refinancing and Mergers

General Offices: Tulsa, Oklahoma

Branch Offices: New York, Dallas, Boston

Say you saw it in The Oil Weekly

PERFECTION VAPOR PRESSURE TANKS
WOOD, AND BOLTED STEEL TANKS



A Perfection Battery that is saving money for its owners in an Oklahoma field.

Standard Equipment of the Oil Fields

Numbered among the hundreds of customers of Black, Sivalls and Bryson are concerns whose names are synonymous with everything that's powerful in the petroleum industry.

For they, like our other customers, have found that our Perfection tanks have all those qualities that they have a right to expect in lease tanks.

And when we say Perfection tanks eliminate evaporation, raise the gravity of your crude, pay for themselves in a short time, besides possessing a dozen or more important points, you will understand what we mean when we refer to "those qualities."

There's a representative in your district. It will pay you to get in touch with him today.

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BARTLESVILLE ~ OKLAHOMA

Branch offices in all principal active fields

Say you saw it in The Oil Weekly

Manufacturer and Supply Dealer Notes

Petroleum Geology, Past and Present

(Continued from page 40)

grees for meritorious work in oil geology.

No two people will ever rank the influence of the educational institutions on the oil industry in the same order; the writer's estimate is: Stanford University, University of Oklahoma, University of California, University of Chicago, University of Pittsburgh, Columbia University and University of Kansas. The Colorado School of Mines stands alone in its specialty—oil shale.

The writer has endeavored to list those educators who have been most responsible for the advanced position of petroleum geology at the present time, but it is a hopeless task. To each of us our own particular teachers are the ones who should receive the credit; and we are right. It is a wonderful commentary on the preparedness of the geology and engineering departments of our institutions that they could so quickly, practically within the last decade, meet the heavy requirements of the great oil industry.

Organization of Petroleum Geologists

Two decades ago there were no organizations of petroleum geologists, because there were practically no petroleum geologists to organize. Today there are many organizations supported in whole, or in a large measure, by members of our profession. The American Institute of Mining Engineers was the first organization to recognize the importance of oil geology and technology Division, with E. DeGolyer and gas in 1916, under the chairmanship of Captain A. F. Lucas. In 1920 the writer succeeded Captain Lucas. In 1922 the status of the oil and gas group was changed to that of a division of the Institute, and then in 1923 to the Institute of Petroleum Technology Division, with E. DeGolyer chairman. Active sections of the division are found in New York, Tulsa, and Tampico, Mexico. The papers of this division, which have been numerous and important, are published by the Institute.

The American Association of Petroleum Geologists was organized in 1917 to meet the needs of the ever growing horde of petroleum geologists in the Mid-Continent field. From a charter membership of about 150, the organization has grown to over 1000 members. The presidents of the organization have been: Alexander Deussen, I. C. White, W. E. Pratt, W. E. Wrather and Max Ball. C. E. Decker has been the secretary. The association publishes an excellent bulletin under the editorship of Raymond C. Moore.

The Society of Economic Geologists, organized in 1920, is made up in large measure of petroleum geologists, while the Southwestern Society of Petroleum Geologists, a semi-professional, semi-social society, is exclusively devoted to our profession. In addition to these there is the Branner Club of Los Angeles, with over 100 members; the Le Conte Club of San Francisco; and several local organizations throughout the country, made up exclusively, or in large part, by petroleum geologists. The British Institute of Petroleum Technologists is the largest and most influential foreign organization in our profession.

The influence of these organizations, in fostering meetings, discussions, and the issuance of publications, in establishing and maintaining standards of professional conduct, and is advancing the interests of the profession, has been such that the oil geologists, as measured by the membership of these organizations, rank among the best of the American professional groups.

Conclusion

Summarizing, we look back over 20 years of steady progress in our profession; of recognition coming to us because we had the foundation based deeply in science, which enabled us to respond to the call of a great and growing industry when it needed our help. We have grown with the industry; we have gained influence in the industry only as we earned it; we have profited only as we have made the industry a greater profit; and we hold the respect of the industry because it believes we are "square shooters."

What has the future in store for petroleum geology, or better, what has petroleum geology in store for the future? We must study proved fields more carefully for more reliable data on which to base our direction of exploration and test drilling, so as to reduce the hazard. We must strive for improvement in technique all along the line of operation. We must fight for conservation and the complete annihilation of waste in production and consumption; and, lastly, we must impress upon the industry and the public, morn and noon and night, the fact that our oil reserves are being rapidly depleted, and that only by improved methods of utilization, with a consequent increase of efficiency, will our domestic oil supply and all that we can bring in from foreign sources be sufficient to meet the requirements even of the immediate future. And we must do this last in the face of the present great over production. It is some job, but it will be done.

Pipe Line Machine Company To Occupy Own Building

Kansas City, Mo., April 2.—About April 15 the California Pipe Line Machine Company of Kansas City will occupy its own modern building which has been erected at the intersection of Fourteenth and Chestnut streets and at that time will move from the company's present location at 2006 Central street. The new building has been necessitated by the increase in the company's business, according to J. J. Mahoney, president and general manager.

The California Pipe Line Machine Company manufactures Mahoney pipe line machines in use by many of the larger pipe line companies.

Supply Companies Open New Winfield, Kansas, Branches

Winfield, Kans., March 31.—Increasing activity in this section of Kansas is bringing new business to Winfield and Arkansas City. Several of the larger supply companies have established branches in Winfield and others have the matter under consideration. Among these are the National Supply with C. G. Cox in charge, the Oil Well Supply Company with Carl Foley of Eldorado, Kansas, in charge and the Continental Supply Company with R. S. Clark in charge. The Bridgeport Machine Company is meeting the needs of the field from the company's general offices in Wichita, Kansas. The Jarecki Manufacturing Company also has opened a branch store here.

In Arkansas City the Acme Foundry and Machine Company of Coffeyville is considering establishing a branch, according to a visit recently made by E. L. Graham, general manager of the company.

Shell Company Opens Offices in Denver

Los Angeles, Calif., April 1. — A. T. Schwennesen, who has been in the geological department of the Shell Company at Los Angeles for some time, departed this week for San Francisco where he will spend several days prior to departing for Denver, Colorado, where he will open an office for the Shell Company.

It is generally known that Shell Company officials look with favor on the Mountain States district and the plans for opening an office at Denver likely means that the company will prepare to get into the game in that territory. Mr. Schwennesen is moving his family to Denver, but it is understood that he will not take any Shell employes with him—probably depending upon local Denver talent to assist him.

Mr. Schwennesen is being succeeded at Los Angeles by John G. Burtt, who has been transferred from the San Francisco office of the Shell. Mr. Burtt will be remembered by Mid-Continent and Texas oil men as having been with the Roxana in that section some three or four years.

Fetty Long Stroke Pumps Are Installed in Wyoming

Eldorado, Kans., April 11.—C. C. Fetty of C. C. Fetty and Company, manufacturers of the Fetty long stroke pumping attachment with general offices and works here, has gone to Wyoming to supervise the installation of some of his attachments. He expects to return in about ten days.

C. C. Fetty and Company is being represented in Louisiana by Ray Wixon and in Oklahoma and Texas by A. E. Riggs. J. G. Robinson will represent the company in Northern and Western Oklahoma and will have headquarters at Blackwell, Oklahoma.

BYERS PIPE

GENUINE WROUGHT IRON

Made of tough, fibrous wrought iron, noted for its resistance to

Crystallization and Rust

Do corrosion and crystallization spell losses of pipe and production to you? Do your tubing and casing give all the service you desire?

Byers pipe costs a little more, for it is made by the old fashioned puddling process, producing a tough, fibrous metal which has become noted for its great resistance to rust and crystallization.

If you are on the lookout for better tubing and casing—pipe which will stand up more successfully in very severe service, whether it is due to rust, or to great physical strains, or to both—the record of Byers pipe will interest you. Get the facts.

Literature on request

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E. A. Small, Jr., 1614 Carter Bldg., Houston, Texas
J. A. Armstrong, Los Angeles, Cal.

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Tubing • Casing • Drill Pipe • Line Pipe

Say you saw it in The Oil Weekly

NEW EQUIPMENT. CATALOGS. BULLETINS. BOOKS

Simplicity Best Feature Of Thompson Valve Puller

The Thompson Standing Valve Puller has recently been placed on the market by the D. & B. Pump Company, 301 West Avenue 26, Los Angeles, California. The new puller consists of the Thompson pull nut or pull bushing, and Thompson cage.

When the Thompson Standing Valve Pullers are used, the Garbutt Attachment is left off entirely. The Thompson Pull Nut is used in the bottom of the plunger, having a case hardened sleeve, which slips up and down in the body of the nut, and is threaded on the inside to take the pin of the Thompson cage.

The Thompson Pull Bushing is the same as the Pull Nut, except that it fits in a blind sleeve making up a plunger bottom valve. The particular advantage to be gained is that by using a valve at the bottom of the plunger with a means of pulling the standing valve, and keeping the two valves in close proximity, the opportunity for gas accumulation and expansion and contraction between the upper and lower valves is eliminated.

In using the Thompson standing valve puller, the Thompson cage is used instead of the ordinary cage on the standing valve and attached to the pull bushing or pull nut by screwing into the case hardened slips one or two turns. When the standing valve seats in the pump, the case hardened slip or sleeve slips up into the body of the pull bushing, so that it does not take the weight of the rods, while the standing valve is being pressed into position. The rods are then given two or three turns to the left so that the pull bushing lets go of the standing valve and the pump is ready for operation.

In pulling, it is only necessary to let the pull bushing down onto the standing valve, giving the rods a few turns to the right, and the standing valve is attached ready to pull out.

The simplicity of this device, its strength in pulling, and its protection against injury, makes it a very satisfactory and desirable attachment.

Joseph McGinity, who sponsors the products of Wilson and Willard Manufacturing Company throughout the Mid-Continent field, is on a three week's trip through Wyoming, Colorado and Montana arranging for spring shipment of equipment to those districts.

Emsco Rotary Disc Bit Has Marked Advantages

Keen interest has been manifest by the oil industry, according to the manufacturers, in a new type of rotary disc bit. This tool is made by the Emsco Steel Products Company of Los Angeles.

It is claimed for this bit that its discs are so mounted on the shank that they will always rotate with the action of the drill pipe as they do not tend to work against each other. This causes the discs to wear down evenly.

Water holes are so placed as to constantly keep the cutting edges washed clean and thus the annoyance of mudding is minimized. A single rather than a forked shank is used. Ample clearance allowance between the body of the bit and the circumference of the drill hole is said to prevent balling up.

It is claimed that as the discs run and wear evenly they produce a better, truer hole.

The choice of materials has been made a point, so as to obviate delays incident to breakage. The discs themselves are made of drop forged steel heat treated. In the event of accidental dropping of drill pipe, it is claimed, the bit will be protected from breaking because of the sturdy construction of the tool.

Further information can be secured by writing the Emsco Steel Products Company, Los Angeles, California.

Oil Conservation Company Opens Offices in Ft. Worth

Cleveland, Ohio, Aprill 11.—In order to more adequately serve the southern part of the Mid-Continent section, the Oil Conservation Engineering Company has opened an office at Fort Worth, Texas, 809 Texas National Bank Building.

A. L. Scudder is in charge of this office. He is well known throughout that field, having represented the Graver Corporation and the Youngstown Boiler and Tank Company in that territory for many years.

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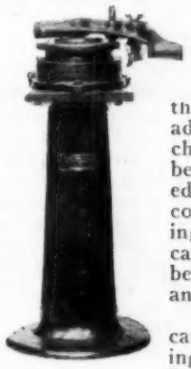
The new building has been necessitated by the increase in the company's business, according to J. J. Mahoney, president and general manager.

The California Pipe Line Machine Company manufactures Mahoney pipe line machines.

New Pipe and Tube Bending Machines Put on Market

Announcement is made by the American Pipe Bending Machine Company, of two new types of pipe and tube bending machines.



Special features of these machines are their sturdiness and adaptability. The machines are suitable for bending old and unfilled wrought iron, steel, copper and brass tubing. Special formers can be furnished for bending angles, tees and flat strips.

Further information can be secured by writing the American Pipe Bending Machine Company, 37 Pearl Street, Boston, Massachusetts.

Shell Company Establishes Office at Denver, Colorado

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Mr. Schwennesen is moving his family to Denver, but it is understood that he will not take any Shell employes with him. He is being succeeded in Los Angeles by John G. Bartt, who has been transferred from the San Francisco office. Mr. Bartt will be remembered by Mid-Continent and Texas oil men as having been with the Roxana in that section some three or four years ago.

Oklahoma City, Oklahoma, April 5.—Eight oil and gas companies with capital stock aggregating $426,000 were granted charters by the secretary of state of Oklahoma during the second and third weeks of March. The largest were the Pierson Oil Company of Tulsa and the Diamond Oil Corporation of Oklahoma City, capitalized for $100,000 each.

The OIL WEEKLY will print on this page data on new oilfield equipment, improvements on old equipment, news of new catalogs, bulletins, etc. This department is handled exclusively by the editorial department and has no connection with the advertising department. Data will be carried on anything which the editorial department thinks of interest to our readers, regardless of whether or not the manufacturer is an advertiser in The OIL WEEKLY.—Publisher.

LETTERS OF Paul Peebles P.S.G.

Mr. Paul Peebles,
Texas
Dear Sir and Geologist:

I am sending you herewith a clipping from the Grove Sun telling about a road that is so bad that it will mire up the lightest of material, and that one mud hole on Cowskin Prairie even mired up the shadow of a buzzard. This certainly sounds like a lie to me, but in this hard rock country we are not well posted on soft deposits like colloidal clay and quick sand. Be glad to hear your idea on it.

Yours truly,
Jim Gardner.

P. S. Cy Avery, Highway Commissioner for Oklahoma, says that if you straighten a road between two towns it moves the towns further apart, which sounds like another lie and can be so proven by experiment, I am sure.
J. H. G.

A Bad Spell of "Rodes"
(From the Grove Sun)

A boy at school the other day was asked to write an article on good roads, and here is what he turned in:

"Good rodes air a fine thing when you ain't got 'em. The rodes we had before the ones we got now were better than the ones we ain't got now. The old rodes had a top and bottom, but the ones we ain't got now has neither top, sides nor bottom. A saddle blanket mired up on the road to Jay the other day, and the shadow of a buzzard was lost in a mud hole on Cowskin Prairie.

"Dad says the old sayin' that 'all rodes lead to Roam' ain't so. He says the ones in Delaware County now lead to a hotter place than Roam in the summertime. Ma says the rodes in this county are just like the men who don't make 'em, no good."

Mr., james h. gardner, prest., geologist, etc.,
oklahoma

deer gentleman jim:

I gess yu think I am a mitty bussy man for not ritin 2 yu no sooner in anser 2 yore letter, but I thort yu wud like this hear rode infermashun later in the seesen when they is reely bad & wen peepul want 2 be usin them. & besides 2 I hav bin bussy like yu seen wen yu was down hear 2 huston 2 the geeology meetin gittin lected pres. & evrything.

well jim sinct yu have bin down hear 2 texas where it is sum cuntry whitch looks good enuff on top that our 4 fathers tooken it for they selves in place of palming it off on the indiens not taxed, not noin that it had oil under it at the time, yu can understand how cum a buzzard cud git his shadder lost in a mud hole. yu only seen sum places where it cud be bad down hear. yu ort 2 go 2 1 of our bussy oil fields when it is reely sumthin goin on like it was forinstnts at west columbia and orange where they did not even put mules on the books because wen they started out in the mornin they did not no how deep they wud be berried bi nite. they used mules 2 fill up mudholes because they was cheeper than 2 try 2 hawl in reglar rode makin stuff & elderado arkansaw wen I was up there the last time was more worser than that on account they hav got hills with mud holes all over them & wen a man or a mule went under it was no tellin wen or where he wud cum out. it was so soft up there that 1 day I seen exhausted steem goin down in the mud till it gotten so mutch pressure that it exploded & made a krater whitch the hold derrick & rig fell in2 & aint bin seed sents. sum peepul sed it was a gas blowout but I was their miself & seen it with mi own eyes. That was the reesen I cum back 2 texas agin.

yu r a little 2 tecknikal callin this mud koloidal clay & quicksand. it aint nuthin but just plane m-u-d mud & I wud defy ennybody, even a palentologist 2 say what it is escept it is mud, because it is 1 substants whitch cant be measured because it aint got no top or no bottom or no sides. maybe yu cud git sum infermashun on what it is theerectikally made out of bi ritin 2 the cenate investigatin komitty up at wash. I wud not advise yu 2 send for no samples frum them tho because it is aginst the law 2 send sutch stinkin stuff as they are handlin threw the males.

well jim I will hav 2 close on account I hav 2 rite a short note 2 mi girl to tell her where I am goin frum hear.

yours truly,
paul peebles, psg, etc.

ps. I shore was glad the boys done like I sed & made yu pres. insted of me like they wanted 2. I told them that I was 2 bussy 2 fool with it & that yu was the next best man & had lots of time. pp.

---

mi deer cleopatry

well cleo hunny wen yu git this letter I will be a far way gone up 2 st. looie where I am goin 2 mix up with the jobbers & see if I can persuade mr. l. v. nicklas 2 not redoose the prise of crude oil just wen mi preducer frends is gittin 2 goin good. yu remember I went up there last yere, hunny, but I can say 2 yu most truthfully that I aint got no telephone numbers because I throwed them all away not noin I wud be back agin this yere, & besides I thort mabe they wud all be moved. I especk I will cum back bi my ole home in arkansaw but will rite 2 yu hunny & tell yu how I cum out at st. lewis. so this is just a note 2 let yu no that I have not forgot mi sweetie.

yore lovin paul.

MARLAND EARNINGS

Ponca City, Oklahoma, April 8.—The annual report for the year 1923, issued by the Marland Oil Company, shows net income of the company available for surplus, to be $1,723,000.19. Gross earnings totaled $37,937,409.50. Operating expenses reached the amount of $31,039,270.07, leaving net earnings to the amount of $6,898,139.43.

Washington, D. C., April 8.—Surveys of Indian allotments in several sections in the southern part of Oklahoma have been started by the general land office as a result of the decision of the supreme court that owners of lands bordering on the north shore of Red River have title which extends to the center of the river bed. The river bed lands to be surveyed are in Tillman county, where oil has been discovered and is being developed.

The supreme court decision held these lands to be the property of the Indians owning the allotments, and the surveys are being made for the purpose of defining and protecting their rights. Competition for leases in these areas is expected to be keen.

SAVE TIME AND MONEY DEALING WITH
The Largest Manufacturer of
BACK PRESSURE VALVES
BRASS OIL WELL SUPPLIES
All Sizes and Weights
For "Drill" and "Line" Pipe
Special Kinds Made to Order
Founders—Finishers—Platers
Write for Price List
Southern Brass Mfg. Co.
Houston, Texas. U. S. A.

ACTUAL FIELD EXPERIENCE

—it takes more than Mechanical Knowledge and Metal to manufacture a dependable oil field supply or piece of machinery.

—it takes Actual Experience—an intimate, first-hand knowledge of the problems and difficulties the men in the field must face day after day.

—GUMBO BUSTER PRODUCTS are the result of a quarter of a century's actual experience in the manufacture of strong, dependable supplies, equipment and machinery for the oil producer.

—That is why you can depend on Gumbo Buster for continuous service always.

Republic Supply Co.
Distributors
Texas -:- Louisiana -:- Arkansas -:- Oklahoma

'GUMBO BUSTER' PRODUCTS

Rotary
Draw Works
Pump
Drilling Engine
Traveling Blocks
Etc.

AMERICAN WELL & PROSPECTING CO.
CORSICANA, TEXAS.
CALIFORNIA BRANCH—LOS ANGELES

Say you saw it in The Oil Weekly

KNOWN STRENGTH

Here is still work of KNOWN STRENGTH. By figures and actual test you know it will stand varying pressures and temperatures with safety and low cost of maintenance. Its strength is a mathematical certainty.

For this reason P. I. W. has been identified these past 30 years with the largest still contracts awarded.

Built by P. I. W. to most exacting specifications
40-Still Drums
38-Reflux Towers

THE PETROLEUM IRON WORKS CO.
SHARON, PA.

NEW YORK HOUSTON ST. LOUIS CASPER TULSA SAN FRANCISCO

Say you saw it in The Oil Weekly

SQUEAKS from the BULL WHEEL

Took Warning

For a long time the restaurant man had out a sign: "Home Cooking."

Then he removed it.

"I see," remarked a customer, "that the old sign is gone."

"Yes, I took it down."

"But why?"

"Because a great many would take a squint at that sign and then hurry on."

Visitor (at very quiet seaside place): And whatever do you people do with yourselves in the winter?

Landlady: Oh, we talks and laughs about the people what stays 'ere in the summer. — Punch.

"Tell me," said the lady to the old soldier, "were you cool in battle?"

"Cool?" said the truthful veteran, "why I fairly shivered."

Why Not

Jimmie giggled when the teacher read the story of the man who swam across the Tiber three times before breakfast.

"You do not doubt that a trained swimmer could do that, do you?"

"No, sir," answered Jimmie, "but I wonder why he did not make it four and get back to the side where his clothes were."

The foreman swore at Cassidy for not taking a full load of bricks up the ladder every trip. One morning the supply of brick ran out and Cassidy, after gathering every one in sight, found he was still short the proper number. He yelled to a workman on the fifth floor.

"What do you want?" asked the man.

"Throw me down wan brick," shouted Cassidy, "to make good me load."—Everybody's Magazine.

Failing Memory

Lady: But why is it you can't remember how long you've been out of work?

Tramp: Well, you see, ma'am, it's this way. I'm not sure whether I was born in '68 or '69.

Headed Off

Mrs. Knagg: I heard your husband boast that in all his married life he had never exchanged harsh words with you.

Mrs. Peck: How could he exchange harsh words with me when I never permit him to talk back.

The Difference

Ride the street car—save the difference;

Ride a Ford—spend the difference;

Walk to work—what's the difference?

First Captain of Industry—What did you ever do with those million washing machines you had made at a cost of $14 apiece and which you said were a complete failure?

Second Captain of Industry—I put a 98 cent German phonograph movement into them and sold them as "console style" talking machines, at $50 down and $10 a month for the rest of their life.

First Captain — That was good.

Second Ditto—Not so good. The price was so small that my customers were suspicious and turned the machines back on my hands. I should have charged three times as much and it would have been all right. Now I'm going to change the machines into radio sets and get rid of them that way.

Johnny had used some unparliamentary language, much to his mother's distress. "Johnny," she cried, "do stop using such dreadful expressions. I can't imagine where you pick them up."

"Well, mother," replied Johnny, "Shakespeare uses them."

"Then don't play with him again," commanded his mother; he's not a fit companion for you, I'm sure."—Argonaut.

Statement of the Ownership, Management, Circulation, Etc.

REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912,

Of the Refiner and Natural Gasoline Manufacturer, published monthly at Houston, Texas, for April 1st, 1924.

State of Texas,
County of Harris—ss.

Before me, a Notary Public in and for the State and County aforesaid, personally appeared A. L. Burns, who, having been duly sworn according to law, deposes and says that he is the Treasurer of the Refiner and Natural Gasoline Manufacturer and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, The Gulf Publishing Company, 1716 Dallas Ave., Houston, Texas.

Editor, R. L. Dudley, 1716 Dallas Ave., Houston, Texas.

Associate Editor, Spencer W. Robinson, 1716 Dallas Ave., Houston, Texas.

Business Manager, R. L. Dudley, Houston, Texas.

2. That the owners are: (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of the stockholders owning or holding 1 per cent or more of the total amount of stock.)

Jas. Anderson, Houston, Texas; R. L. Blaffer, Houston, Texas; Mrs. S. C. Blaffer, Houston, Texas; A. L. Burns, Houston, Texas; R. E. Connell, Pittsburgh, Pa.; H. W. Draper, Houston, Texas; Dr. N. L. Dudley, Goose Creek, Texas; R. L. Dudley, Houston, Texas; B. V. Ellzey, El Paso, Texas; W. S. Farish, Houston, Texas; D. H. Freel, Casper, Wyo.; Dr. J. L. Gross, Kansas City, Mo.; Howard R. Hughes Estate, Houston, Texas; Chas. H. Lane, Houston, Texas; W. B. Larkin, Wichita Falls, Texas; J. H. McEvoy, Houston, Texas; J. H. McEvoy, Jr., Houston, Texas; W. A. Miles, Ft. Worth, Texas; C. F. Mirus, Tampico, Tamps., Mexico; Mrs. J. B. Moore, Houston, Texas; David M. Picton, Jr., Houston, Texas; Wallace E. Pratt, Houston, Texas; Spencer W. Robinson, Houston, Texas; J. E. W. Schneider, Houston, Texas; C. N. Scott, Houston, Texas; R. S. Sterling, Houston, Texas; Jno. R. Suman, Houston, Texas; Wm. A. Vinson, Houston, Texas; E. C. Waldvogel, Pelham, New York; Bud Waller, Chicago, Ill.; C. F. Williams, Humble, Texas; E. E. Watts, Houston, Texas; G. C. Wood, Houston, Texas; R. L. Young, Houston, Texas.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.)

H. C. Weiss, Houston, Texas; Jas. Anderson, Houston, Texas; Howard R. Hughes Estate, Houston, Texas; R. L. Blaffer, Houston, Texas; W. S. Farish, Houston, Texas; Chas. H. Lane, Houston, Texas; John Hammon, Houston, Texas; R. S. Sterling, Houston, Texas; Maurice Hirsch, Houston, Texas.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and secrity holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stocks and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is ..... (This information is required from daily publications only.)

A. L. BURNS, Treasurer.

Sworn to and subscribed before me this 2nd day of April, 1924.

(Seal) Maurice Hirsch,

(My commission expires June 30th, 1924).

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For Oil and Gas Wells

To Hold Any Pressure in the Earth

To Fit Any Casing in the Hole

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Smackover, Ark.

Westcott & Greis:
Dallas, Tex.
Tulsa, Okla.

DuVal-Kirk Co.:
Los Angeles, Calif.

GUIDE FOR PURCHASERS

Air Compressors—
Southern Engine & Pump Co.

Air Lift Pumping Equipment—
Sullivan Machinery Co.

Attorneys—
Hirsch & Hannay
Vinson, Elkins & Wood

Balls and Seats—
Bradford Motor Works
The Chas. N. Hough Mfg. Co.

Band Wheels—
International Derrick & Equipment Company
Lee C. Moore & Co., Inc.

Banks—
Commercial National Bank

Belting—
Bridgeport Machinery Co.
Continental Supply Co.
D. F. Connolly Agency
Frick-Reid Supply Co.
Oil Well Supply Co.
Republic Supply Co.
Stanley Belting Corp.

Boilers—
Bridgeport Machine Co.
The Brownell Co.
D. F. Connolly Agency
Continental Supply Co.
Frick-Reid Supply Co.
International Supply Co.
The National Supply Cos.
Oil Well Supply Co.
Republic Supply Company
Regan Forge & Engineering Co.
Titusville Iron Works Co.
United Iron Works, Inc.
See Oil Field Supplies and Tanks

Blowout Preventer—
Baash-Ross Tool Company
Cameron Iron Works
Regan Forge & Engineering Co.

Burners—
Gaso Pump & Burner Mfg. Co.
Gould Burner Co.
Regan Forge & Engineering Co.

Bull Wheels—
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.
Tulsa Rig Reel & Mfg. Co.

Calf Wheels—
International Derrick & Equipment Company
Lee C. Moore & Co., Inc.

Casing—
David L. Schofield
Oil Field Salvage Co.
Regan Forge & Engineering Co.
Republic Supply Company
Superior Tube Co.

Casing Shoes—
Baker Casing Shoe Co.
Bridgeport Machine Co.
Continental Supply Co.
Gulf Coast Machine & Supply Co.
The National Supply Cos.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Republic Supply Company
W-K-M Co.

Cement Hardener—
The Sullivan Co.
W-K-M Co.

Compressors—
Butler Mfg. Co.
F. W. Heitmann Co.
Hope Engineering Co.
Sullivan Machinery Co.
United Iron Works, Inc.

Control Heads—
Palmer Specialty Co.

Core Drills—
Elliott Core Drilling Co.
Spengler Core Drilling Co.

Cordage—
D. F. Connolly Agency
Continental Supply Co.
The National Supply Cos.
Republic Supply Company

Crown Blocks—
American Well & Pros. Co.
Baash-Ross Tool Company
Boykin Machinery & Sup. Co.
Gulf Coast Machine & Supply Co.
International Derrick & Equipment Co.
Lufkin Foundry & Machine Co.
Oil City Iron Works, Inc.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Superior Tube Co.

Couplings—
Harrisburg Pipe & Pipe Bending Co.
Smith Coupling Co.
Superior Tube Co.

Dehydrating Processes—
W. S. Barnickel & Co.
Petroleum Rectifying Co.

Derricks and Rigs—
International Derrick & Equipment Co.
Lee C. Moore & Co.
National Turnbuckle Derrick Co.
Parkersburg Rig & Reel Co.
Peden Iron & Steel Co.
Tulsa Rig Reel & Mfg. Co.
Superior Tube Co.

Diamond Core Drills—
Sullivan Machinery Co.

Disc Bits—
Rotary Disc Bit Co.

Ditchers—
Buckeye Traction Ditcher Co.

Draw Works—
American Well & Pros. Co.
Lufkin Foundry & Machine Co.

Drilling Cables—
American Cable Co.
Bridgeport Machine Co.
D. F. Connolly Agency
Continental Supply Co.
Frick-Reid Supply Co.
F. W. Heitmann Co.
The National Supply Cos.
Peden Iron & Steel Co.
Regan Forge & Engineering Co.
Republic Supply Company
Williamsport Wire Rope Co.

Drill Pipe Slips—
Baash-Ross Tool Company

Drilling Machines—
Bridgeport Machine Co
Keystone Driller Co.
Parkersburg Rig & Reel Co.

Drill Collars—
Baash-Ross Tool Company

Drill Pipe Cutting—
Baash-Ross Tool Company

Drilling Tools—
Baash-Ross Tool Co.

Drill Pipe—
Continental Supply Co.
Frick-Reid Supply Co.
Republic Supply Company
Reading Iron Co.
Standard Seamless Tube Co.
Superior Tube Co.

Drilling Equipment—
American Well & Pros. Co.
Baash-Ross Tool Company
Bridgeport Machine Co.
Continental Supply Co.
Republic Supply Company

Drive Pipe—
Republic Supply Company
Reading Iron Co.
Superior Tube Co.

Electrical Equipment—
Southwest Gen. Elec. Co.
Westinghouse Elec. & Mfg. Co.

Elevators—
B. & C. Machine & Fndy. Co.
Bridgeport Machine Co.
Dunn Mfg. Co.
Gulf Coast Machine & Supply Co.
LeBus Rotary Tool Works
Wilson & Willard Mfg. Co.

Engines, Diesel—
Western Machinery Co.

Engines, Gas—
The Braden Co.
Frick-Reid Supply Co.
Western Machinery Co.

Engines, Oil—
Continental Supply Co.
Frick-Reid Supply Co.
Western Machinery Co.

Engines, Pumping—
Ajax Iron Works
American Well & Pros. Co.
Bessemer Gas Engine Co.
Bridgeport Machine Co.
The Brownell Co.
De La Vergne Machine Co.
C. C. Fetty & Co.
Franklin Valveless Engine Co.
Frick-Reid Supply Co.
Hope Engineering Co.
Lucey Mfg. Corp.
Lufkin Foundry & Machine Co.
The National Supply Cos.
National Transit Pump & Machine Co.
Oil Well Supply Co.
Peden Iron & Steel Co.
Republic Supply Company
Rock Island Plow Co.
Southern Engine & Pump Co.
Titusville Iron Works
Western Machinery Company

Engineers—
A. C. Bierman
C. N. Black
Samuel J. Caudill
David Donoghue
C. C. Fetty & Co.
Foster & Reiter
F. W. Freeborn Eng. Co.
E. F. Kuehnle
Geo. C. Matson
Lee C. Moore & Co.
Oil Conservation Engineering Co.
L. H. Owen
D. T. Ring

Fire Protection—
Oil Conservation Engineering Co.

Fish Tail Bits—
American Well & Pros. Co.
Frick-Reid Supply Co.
Gulf Coast Machine & Sup. Co.
Lucey Manufacturing Corp.
Pelican Well Tool & Sup. Co.
Regan Forge & Engineering Co.
W-K-M Co.

Floor Circle Brace—
Dunn Mfg. Co.

Fuel Oil—
Gulf Ref. Co.
Sinclair Ref. Co.

Gas Traps—
Trumble Gas Trap Co.

Gasoline Extraction Compressors—
Bessemer Gas Engine Co.
Sullivan Machinery Co.

Gasoline and Oil Storage Tanks—
Butler Mfg. Co.
Graver Corporation
Kansas City Struct. Steel Co.
Parkersburg Rig & Reel Co.

Gauges—
The Foxboro Co., Inc.
Oil Conservation Engineering Co.

Gauge Boards—
The Foxboro Co., Inc.

Genuine Wrought Iron Casing—
Reading Iron Co.
Superior Tube Co.

Geologists—
A. C. Bierman
Samuel J. Caudill
Alexander Deussen
David Donoghue
Edwin B. Hopkins
Foster & Reiter
Geo. C. Matson
Herald Bros.

Grips and Clamps—
J. P. Ratigan
W-K-M Co.

Heat Exchangers—
Brown Welding & Machine Co.

Hose—
D. F. Connolly Agency

Houses—
Crain Ready-Cut House Co.

Laboratory Equipment—
Fort Worth Laboratories

Lease Equipment—
The Braden Co.

Lighting Systems—
Bridgeport Machine Co.
Westinghouse Elec. & Mfg. Co.

Line Pipe—
Continental Supply Co.
Republic Supply Company
Reading Iron Co.
Superior Tube Co.

Manufacturers—
Robinson Packer Co.

Maps—
Heydrick Mapping Co.
Standard Blue Print, Map & Engineering Co.

Meters—
The Foxboro Co., Inc.

Motors—
Westinghouse Electric & Mfg. Co.

Oil Field Supplies—
American Well & Pros. Co.
B. & C. Machine & Fndy. Co.
The Braden Co.
Bridgeport Machine Co.
Butler Mfg. Co.
D. F. Connolly Agency
Continental Supply Co.
C. C. Fetty & Co.
Frick-Reid Supply Co.
Graver Corporation
Gulf Coast Mach. & Sup. Co.
International Supply Co.
Kansas City Struct. Steel Co.
Lee C. Moore & Co.
Lucey Manufacturing Corp.
The National Supply Cos.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Peden Iron & Steel Co.
Pelican Well Tool & Sup. Co.
Republic Supply Company
Regan Forge & Engineering Co.
Robinson Packer Co.
H. M. Spence
Superior Tube Co.
Tulsa Rig Reel & Mfg. Co.
United Iron Works, Inc.
W-K-M Co.

GUIDE FOR PURCHASERS—Continued

Oilwell Casing—
Frick-Reid Supply Co.
Republic Supply Company
Superior Tube Co.
Texas Pipe & Supply Co.

Overshots—
Baash-Ross Tool Co.
LeBus Rotary Tool Works

Packers—
The Guiberson Corp.
Layne & Bowler
Robinson Packer Co
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
W-K-M Co.
Exner-Dodge Packer Co.

Packing—
D. F. Connolly Agency
Frick-Reid Supply Co.
The National Supply Cos.
Peden Iron & Steel Co.
Pelican Well Tool & Sup. Co.
Republic Supply Company

Paints—
Peden Iron & Steel Co.

Panel Boards—
Westinghouse Electric & Mfg. Co.

Patents—
Hardway & Cathey
Jesse R. Stone

Pipe Grips—
W-K-M Co.

Pipe—
A. M. Byers Co.
Continental Supply Co.
W. E. Detlor
Frick-Reid Supply Co.
F. W. Heitmann Co.
Harrisburg Pipe & Pipe Bending Co.
International Supply Co.
The National Supply Cos.
Oil Well Supply Co.
Peden Iron & Steel Co.
Reading Iron Co.
Republic Supply Company
David L. Schofield
Superior Tube Co.
Standard Seamless Tube Co.
Williamsport Wire Rope Co.

Pipe Screwing Machines—
Buckeye Traction Ditcher Co.

Pipe Wrenches—
Continental Supply Co.
Dunn Mfg. Co.
The Guiberson Corp.
LeBus Rotary Tool Works
Republic Supply Company

Portable Buildings—
Butler Mfg. Co.
International Derrick & Equipment Co.

Portable Compressors—
Sullivan Machinery Co.

Portable Drillings Rigs—
Bridgeport Machinery Co.
Lee C. Moore & Co.
Oil Well Service Co.
Parkersburg Rig & Reel Co.
The National Supply Cos.

Pulleys—
International Derrick & Equipment Co.
Lee C. Moore & Co.

Pulling Machines—
Clark Machine Co.
Myrick Machine Co.
Safety Pulling Machine Co.

Pumps—
Axelson Machine Co.
American Well & Pros. Co.
Bradford Motor Works
Continental Supply Co.

Pumps—(Cont.)
D. & B. Pump & Sup. Co.
C. C. Fetty & Co.
Frick-Reid Supply Co.
Gaso Pump & Burner Mfg. Co.
Goulds Manufacturing Co.
Lucey Manufacturing Corp.
National Transit Pump & Machine Co.
Oil Well Supply Co.
Pelican Well Tool & Supply Co.
Republic Supply Company
Southern Engine & Pump Co.
Texas Oil Pump Co.
United Iron Works, Inc.

Pumping Powers—
The Braden Co.
C. C. Fetty & Co.
Frick-Reid Supply Co.
Jensen Bros. Mfg. Co.
Kansas City Hay Press Co.
H. M. Spence

Refined Products—
Gulf Refining Company
Humble Oil & Refining Co.
Sinclair Refining Co.
Sunshine State Oil & Ref. Co.

Recorders—
Fort Worth Laboratories
The Foxboro Co., Inc.

Refinery Equipment—
Butler Mfg. Co.
Continental Supply Co.
Gardner Governor Co.
Graver Corporation
Kansas City Struct. Steel Co.
Oil Conservation Engineering Co.
Republic Supply Company
Titusville Iron Works
United Iron Works Inc.
Wyatt Metal & Boiler Works

Rig Irons—
International Supply Co.
Lee C. Moore & Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Republic Supply Company

Rotary Rock Bits—
Hughes Tool Co.

Rotary Fish Tail Bits—
Continental Supply Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Republic Supply Company
W-K-M Co.

Rubber Fillers—
National Rubber Filler Co.

Screens—
Pacific Oil Tools Co.

Sectional Steel Buildings—
The Braden Co.

Separators—
Butler Mfg. Co.
Trumble Gas Trap Co.

Strainers—
Layne & Bowler Co.
Pelican Well Tool & Supply Co.

Structural Steel—
Butler Mfg. Co.
Kansas City Struct. Steel Co.
Pennsylvania Tank Car Co.
United Iron Works, Inc.

Steel Derricks—
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.
Superior Tube Co.

Steel Crown Blocks—
Gulf Coast Mach. & Supply Co.
International Derrick & Equipment Company
Lee C. Moore & Co.
Parkersburg Rig & Reel Co.
Superior Tube Co.

Steel Manufacturers—
Colonial Steel Co.

Steel Storage Tanks—
Butler Mfg. Co.
Graver Corporation

Strainers—
J. H. McEvoy & Co.
W-K-M Co.

Sucker Rod Lines—
D. F. Connolly Agency
Continental Supply Co.

Sucker Rods—
Axelson Machine Co.
D. & B. Pump & Sup. Co.
Dunn Mfg. Co.
Frick-Reid Supply Co.
S. M. Jones Co.
The National Supply Cos.
Oil Well Supply Co.
J. P. Ratigan
Republic Supply Company

Sucker Rod Sockets—
Bradford Motor Works
Brown Welding & Machine Co.

Swabs—
B & C Machine & Foundry Co.

Tank Bolts—
Steel Mfg. & Warehouse Co.

Tank Cars—
Pennsylvania Tank Car Co.

Tanks—
American Tank Co.
Butler Mfg. Co.
Black, Sivalls & Bryson
The Brownell Co.
Gantz Tank Co.
Graver Corporation
Kansas City Struct. Steel Co.
Maloney Tank Co.
Columbia Steel Tank Co.
Parkersburg Rig & Reel Co.
Petroleum Iron Works
United Iron Works Co.
Wyatt Metal & Boiler Works

Tank Equipment—
Oil Conservation Engineering Co.

Tank Gauge Engineer—
L. M. Hall

Tret-O-Lite—
W. S. Barnickel & Co.

Thermometers—
Fort Worth Laboratories
The Foxboro Co., Inc.

Tongs—
Bridgeport Machine Co.
Dunn Mfg. Co.
Guiberson Corp.
LeBus Rotary Tool Works
Pelican Well Tool & Supply Co.
Wilson & Willard Mfg. Co.
W-K-M Co.

Tool Joints—
American Well & Pros. Co.
Baash-Ross Tool Company
Boykin Machinery & Sup. Co.
Bridgeport Machine Co.
Continental Supply Co.
Hughes Tool Co.
Pelican Well Tool & Sup. Co.
Regan Forge & Engineering Co.
Republic Supply Co.
W-K-M Co.

Tools (Fishing and Drilling)—
Bridgeport Machine Co.
Brown Welding & Machine Co.
Frick-Reid Supply Co.
Hughes Tool Co.
International Supply Co.
Oil Well Supply Co.
Peden Iron & Steel Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Republic Supply Company
Sullivan Machinery Co.
W-K-M Co.

Toothless Slips—
LeBus Rotary Tool Works

Tractor Winch—
Rock Island Plow Co.
Tulsa Rig Reel & Mfg. Co.

Traveling Blocks—
American Well & Pros. Co.
Baash-Ross Tool Company
Boykin Machinery & Sup. Co.
Gulf Coast Machine & Supply Co.
Lufkin Foundry & Machine Co.
Regan Forge & Engineering Co.

Tubing Catcher—
Dunn Mfg. Co.
Guiberson Corp.

Tubing Lines—
D. F. Connolly Agency

Tubing—
Republic Supply Company
Reading Iron Co.
Standard Seamless Tube Co.
Superior Tube Co.

Underreamers—
American Well & Pros. Co.
Bridgeport Machine Co.
Wilson & Willard Mfg. Co.

Vacuum Pumps—
Sullivan Machinery Co.

Valves—
Bradford Motor Works
Darling Valve & Mfg. Co.
The Charles N. Hough Mfg. Co.
Texas Oil Pump Co.
Ludlow Valve Mfg. Co.
Oil Conservation Engineering Co.
Pratt & Cady
Reading Steel Casting Co.
Reading Valve & Fittings Co.
Westcott Valve Mfg. Co.
W-K-M Co.

Valves and Fittings—
Continental Supply Co.
Darling Valve & Mfg. Co.
D & B Pump & Sup. Co.
F. W. Heitmann Co.
Ludlow Valve Mfg. Co.
Lufkin Foundry & Machine Co.
The National Supply Cos.
Peden Iron & Steel Co.
Pratt & Cady
Republic Supply Company
Reading Steel Casting Co.
Reading Valve & Fittings Co.
United Iron Works
W-K-M Co.

Walking Beams—
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.

Welding and Cutting Equipment—
Imperial Brass Mfg. Co.

Working Barrels—
Axelson Machine Co.
Bradford Motor Works
Continental Supply Co.
D & B Pump & Sup. Co.
Republic Supply Company
The Charles N. Hough Mfg. Co.
Texas Oil Pump Co.
McGregor Working Barrel Co.

Water Gauges—
F. W. Heitmann Co.

Water Cans—
H. P. Gott Mfg. Co.

Wire Rope—
Bridgeport Machine Co.
D. F. Connolly Agency
Continental Supply Co.
Houston Oil Field Material Co.
International Supply Co.
Regan Forge & Engineering Co.
Republic Supply Company
The National Supply Cos
Williamsport Wire Rope Co.

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25 to 60 H. P. Single Cylinder.

Bulletin No. 312:
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"Western" Type "R" Reverse Gear.

Bulletin No. 512:
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